

# Duality | Fluidity -- Yin-Yang and Bath House

by

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Bachelor of Architecture  
Tianjin University  
Tianjin, China  
July 1995

submitted to the Department of Architecture in in partial fulfillment of the  
requirements for the degree of Master of Architecture & Master of Science  
in Architecture Studies  
June 2003

signature of author



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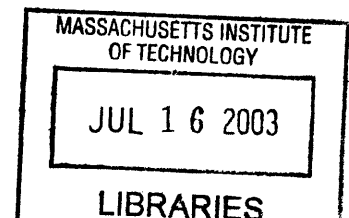


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## **Abstract**

This thesis attempts to synthesize different design issues that revolve around the program of a public bathhouse in a bustling cultural district in Beijing, China. While the larger design framework evolves from the basics of bathing - the themes of earth, water and light, other design considerations that reflect the roots of Chinese traditions, namely, the configuration which is the metaphor of the garden and the memory of the culture, the concepts of yin-yang and modularity, the spatial order of man and woman, the sensuality and physicality of wetness and dryness, etc., have been explored. The thesis explores how different strategies that are exhibited in traditional Chinese art forms – the concepts of *duality* and *fluidity* – can inform the design to create architecture that is modern, yet at the same time Chinese.

thesis supervisor: Ann Pendleton-Jullian  
associate professor in architecture

### ***Thank you***

to my committee: for their enthusiasm to Chinese culture and tremendous support in the process, Ann for her belief in the strength of the beauty of the concept, Michael for encouraging both inquiry and sensuality, David for his insightful criticism and Erika for her openmindedness from an art historian point of view.

to Fernando, for his inputs through a refined sensibility that led to a considerable enhancement of my project.

to mom and dad, for their love and encouragement.

to Feng, for his unconditional support and taking care of things when I couldn't.

to my thesis buddies: Pam, Leo and Rye, for putting up with each other in a cozy space.

to Kavita, for listening to me and giving mental support from far away.

to Keo-Soo, for helping and sharing thoughts with me.

and to Danny, for helping and getting help from a cat lover in every way...



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background



English Title: Shower  
Original title: Xizhao (Xizao).  
Directed by: Yang Zhang. 1995

The desire for a culture to seek roots and keep its own identity comes as naturally as human instincts. However, today, more obviously than anytime in the past, this desire has recessed to a mere remote feeling, because technological advance, political rationality and globalizing capitalism oftentimes find the cultural past a hindrance. There is a Chinese movie made in recent years called *Shower* telling a story about a traditional bathhouse that has been a natural community center and the neighborhood's meeting place for decades where the elders chat, drink, fight cricket, etc. However, all this will be demolished to make way for some new development that the government has in mind. What will happen to these people and the community that has grown around the bathhouse after the neighborhood is paved over? The film clearly depicts the issue that concerns the Chinese people today as they are removing the old and embracing the modern. The question is that whether it is possible for the deep spirit of a culture, the traditional pattern of behavior to find its life and be vibrant in a country under the grip of change, and how architecture responds to that. It is my belief that architecture can reveal culture in the most unpretentious way. Culture is the sum of the creative work of mankind, and architecture, like other arts, is the device to carry it and pass it on through time. Culture is the way people cultivate life, and architecture provides spaces where life unfurls.

To carry the traditional culture forward brings up the paradox of re-presenting the tradition while applying the modern universal technique. The act requires a critical assessment of the tradition, an understanding of the contemporary world, and then the re-presentation of the former through the means provided by the latter.

The ancient Chinese culture had once reached the zenith of civilization. However, the very philosophy that led to the cultural splendor in ancient times did not prevent itself from being falsely used, causing several catastrophic ruptures in the past two to three hundred years, during which the western world had gone through the Enlightenment, Industrial Revolution and subsequently the Modern Movement. Each rupture occurred in China had brought about certain



*Skyscrapers in Shanghai, Pudong, China, Photograph taken in 2002*



*A hotel building in Beijing, photograph taken in 2002*

degree of cultural transformation, within which the authenticity of Chinese tradition had gradually lost its essence. These transformations had not only generated arts of little value in inheriting the tradition, but also stopped cultural communication between China and the rest of the world. The recent transformation was carried out under the socio-political ideology – a utopian vision by which things associated with the tradition and the past should be discarded. In the cities, large amount of buildings were constructed and streets were considerably widened. The urban transformation was not only to accommodate the increasing needs of the population, but also to symbolize the utopian ideology. Due to budget constraints, the urbanscape took on a homogenous appearance, and was designed merely to meet physical necessities. Decades of revolutions had considerably diluted the density of the presence of the tradition, and left the Chinese vague consciousness for the deep spirit within their culture.

It was not until twenty years ago that the cross-cultural communication was resumed. In the past two decades, the world has been undergoing globalization as an inevitable result of the technological advance ever since the Industrial Revolution. Having not regained the full consciousness of returning to its cultural roots, China rapidly merged into the trend of globalization. The booming economy has brought about huge amount of constructions, which leads to a rapidly changing physical environment – one that symbolizes the globalization built on top of the banality of the buildings and cityscape left over from the previous cultural transformation. Virtually, another transformation was generated. Comparing to the previous transformations, although this one is *constructive* to the physical environment, it is destructive as well in cultivating the tradition. The thought pattern reflected in most design works as the result of the attempt to combine the east tradition and the west modern has not been able to reveal either the genuine spirit of the Chinese tradition or the substances behind the western images. None the less, it should be acknowledged that there had been admirable efforts in some architects in bringing back the traditional spirit. However, on the one hand, the efforts had been made rather invisible to the larger audience due to the overwhelming prevalence of the market and the modern consumerism; on the other



*Fragrant Hill hotel, Entrance Lobby, Beijing, Designed by I.M. Pei in 1989*



*Moon gate in Liu Yuan, a traditional Chinese garden in the city of Suzhou, Jiangsu Province*



hand, with only a few exceptions, most works had largely stayed in the level of nostalgia that leads to the imagery resemblance rather than the transformation that leads to the spiritual link between the old and the new.

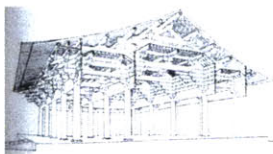
*View of Dongcheng District,  
Beijing, 2002*



Following the spirit of those architects in seeking Chinese cultural roots, the intention of this thesis is to make another effort into the re-interpretation of the traditional cultural, and the re-presentation of it in Chinese contemporary architecture.

In traditional Chinese architecture, the most commonly used materials are wood and earth. The nature of these two materials largely determined the means of construction and the character and sense of the spaces. Today however, there is a considerable shortage both in forest and farmland in China, thus earth and wood, the two traditional building materials are no longer available. Then, how to use the available contemporary materials and means of construction to carry out the traditional sense of spaces in today's architecture becomes a big challenge. To make the "transformation" and create the "link" between the old and the new requires firstly the critical assessment of the tradition, secondly the understanding of the world in front of us, and then the re-presentation of the former through the means provided by the latter.

As a point of departure, the strategies for ancient Chinese in making arts have been examined, specifically on how the generic principles and specific rules are defined in the design of certain form of art, and how individuality finds its means of expression while conforming to the principles and rules.

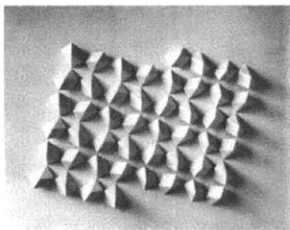


*Foguangsi main hall,  
structure system, AD 857,  
Shanxi Province*

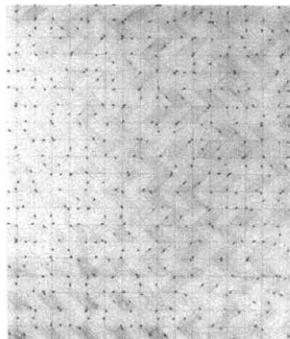
*"Thirty spokes share one hub. / It is the space (the Nothingness) between them / That makes a cart function as a cart. / Knead clay to make a vessel / And you find within it the space / That makes a vessel as a vessel. / To build a house with doors and windows / And you find within them the space / That makes a house function as a house.*

*/ Hence the Being (substance) can provide a condition / Under which usefulness is found, / But the Nothingness (space) is the usefulness itself."*<sup>1</sup>

The first definition for space in China was made by Lao Tze more than two thousand years ago. As Lao Tze stated, *usefulness* and *Function* are the essential characters in defining the space. As a matter of fact, the traditional Chinese philosophy is one based on utilitarianism. The aesthetic values of things are very much dependent upon how useful they are. The elegant curved roof in Chinese traditional architecture was built more towards the rationality of structure and meeting the functional need to drain water effectively. The rationale under the Chinese sense of aesthetics, therefore, was the reasonability of function and usage. The highest level of reasonability is achieved through using the least to produce the most, in which simplicity yields flexibility and multiplicity.



*Luis Tomasello, Reflection NO. 60, 1960. The repetition and variation in position of one piece of mass with defined shape creates rich alteration of spaces and solid under the light*



*Larry Poons, Untitled pencil drawing, 1964. "On a prearranged grid Poons advanced and rotated the constellation of dots in a strict system sufficiently complex to convince the spectator that the system was random rather than controlled and systematic." – George Rickey, Constructivism, George Braziller, New York, p.154*

The most representative application of the utilitarian philosophy in design concept is the "Module" thought pattern, which is behind many traditional art forms. It is embodied in the formation of Chinese characters, in painting, in making the terracotta soldiers in the Qin Dynasty (220BC), in the bracketing system in architecture construction, in designing space, etc. The aesthetic ambition for these arts is spontaneity following certain discipline. Spontaneity defines individuality, and discipline is derived from the module thought pattern. In the Chinese definition of arts, module and individuality are two inseparable parts that constitute the source of creativity. This concept is very similar to some of the design methodologies advocated by the early twenties century modernists in the western world, such as that of Constructivism. An analogue could be drawn between the images of the two periods, although they are over a thousand years apart.

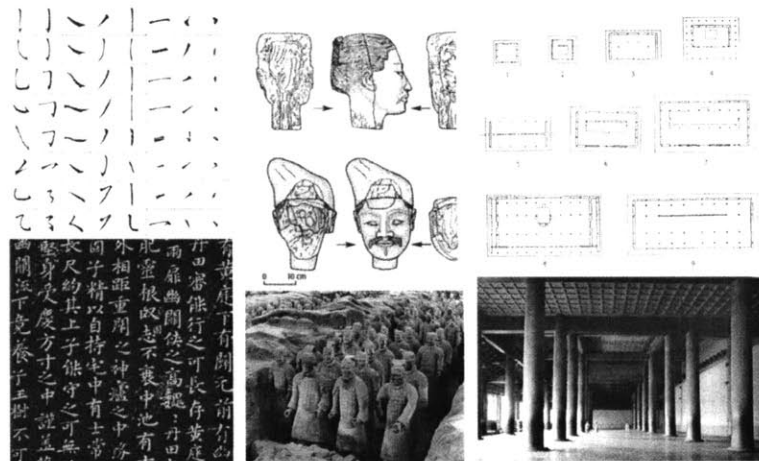
Quite different from most of the other architectural typology, Chinese garden design (flourished in the Song Dynasty 960-1279AD) does not follow the strategy of module, but goes with the intention of creating poetry – to express the impression of nature. The multiple views and the extremely rich spatial experience – one of constant discovery – coincide exactly with Umberto Eco's description in 1960s for the modern "Open Work". According to Eco, an "Open Work" has multiplicity and plurality of meaning; it provides

various visual devices for the observer's attention to focus on.

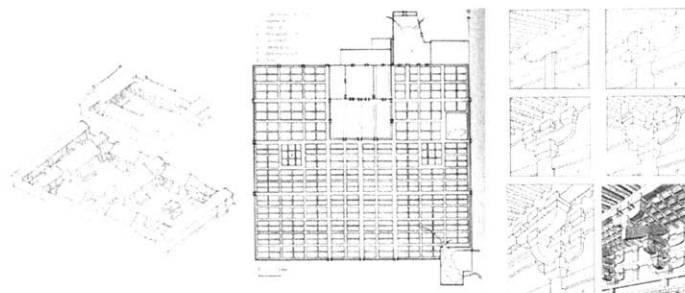
## Module

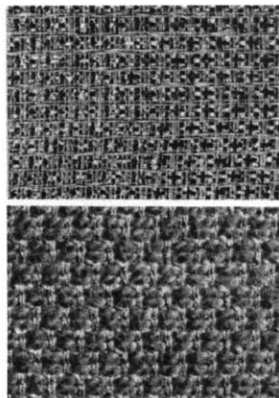
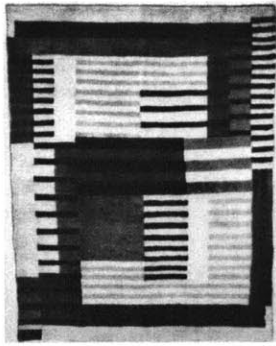
In his book "Ten Thousand Things", Lothar Ledderose started with the description of a unique type of jigsaw puzzle: "A chain of mountain peaks at the left flattened out toward the right into a wide plain dotted with a tower, houses, trees, carriages, and a rider. But the pieces does not have curved edges or interlocking shapes, rather they were all simple rectangles, tall and thin, arranged in a horizontal sequence"<sup>1</sup>. The seemingly easy "puzzle" actually turned out to be quite difficult, because no matter how the sequence of each element is changed, one can always read a coherent panorama out of it. The trick lies on the consistent position of the horizontal line on each piece, so no matter how the composition changes, the horizon is always continuous, and thus always guarantees a readable panorama. This jigsaw puzzle was made in China.

From left to right: 64 basic strolls that formed unlimited number of characters; Terra-cotta soldiers made in 200BC; Module space in traditional Chinese architecture



From left to right: Layout of courtyard house; Plan of imperial Chang An; Bracket system





Anni Albers, *Weaving Workshop at Bauhaus, 1927*

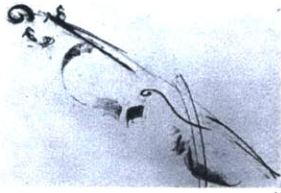
Ledderose made the argument that Chinese create works of art by first defining elements, which he calls "module", and then by playing with them. He demonstrated this through the example of several Chinese traditional art forms. In the formation of Chinese characters, there are only sixty four stroke types, but they built up unlimited forms of combination. In making the terra-cotta soldiers in Qin Dynasty (220BC), the modules of parts of the body were first made and then assembled in various ways to create a real army in which every soldier is slightly different. In the construction of architecture, the bracketing system is a module system. The very complicated bracket clusters contain just four basic types of wood members – Dou, Gong, block and transient beam. In designing space, "Bay" is the module. The simplest building has only one bay, it is a pavilion. In courtyard house, the symmetrical and north-south oriented yard space repeats itself yet in a slightly different way, so that each courtyard has its own character. The same system has been applied to the scale of a city. It can be found in the plan of imperial Chang An city (around 600 AD), as well as the layout of the Forbidden City in Beijing (1200 AD).

## Painting & Calligraphy



Paintings by Qi, Baishi (1864-1957)





*"A shorthand notation of the perception of a violin... The roaring tiger created out of pure fantasy images. The success of these studies depends on the students' ability to overcome his intellect and the function of his senses and give himself totally to spontaneous feelings." – Johannes Itten, The Foundation Course at the Bauhaus, Education of Vision, ed. Gyorgy Kepes, (George Braziller, New York, 1965)*

In order to express the perception to the nature rather than the literal images and composition in the nature, the painter uses the technique of Xie Yi. The painting does not conform to accurate perspective, human and animal figure are not precisely proportioned. Through the control of the amount of water and the speed of stroll movement, the painting is given a wetness that is essential in representing the feeling of ambiguity, the blurring and the indeterminacy of the impression. The different level of wetness – the Yun Wei - is achieved through the painter's proper rhythm during the action of painting. The rhythm determines the time needed to finish a painting; the time can neither be too long or too short.

*Painting by Chi Baishi, 1931, Ink on rice paper, 34.5 x 35 cm, Collection of the work of Chi, Baishi (2), Hunan Fine Art Press, Changsha, China, 1999*



The brush work is the most difficult part of learning Chinese painting, the principle being to use minimum amount of strolls to achieve the maximum amount of effect. The specific medium of Chinese painting – the thin and soft rice paper that absorbs water very fast and holds color firmly, and the water soluble color that is even more transparent compared to water color - determines that once a stroll is put down, there is no way to either erase it or cover it up. The painter needs to constantly adjust his/her following strolls to the previous ones to make a successful finished painting.



The process is very much about spontaneity and improvisation.

*Painting by Chi, Baishi, 1920,  
Ink on rice paper, 47 x 41  
cm*

Collection of the work of Chi,  
Baishi (2), Hunan Fine Art  
Press, Changsha, China, 1999



*Gift Book(30), Brice Marden,  
1983, 32.4 x 25.1 cm,  
Collection of the artist,  
Courtesy of Matthew Marks  
Gallery, New York*



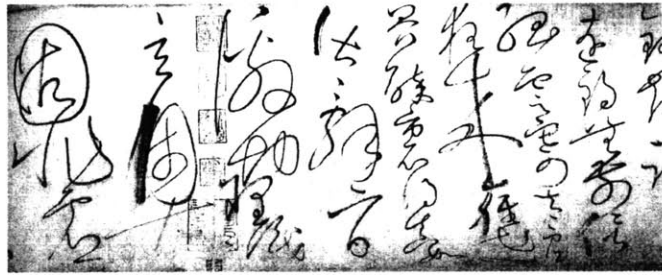
*Painting No. 32, Jackson  
Pollock, 1950*

Calligraphy was defined as the highest art when the literati class came into power, because it is the means to carry literature. The rule for the art of calligraphy is stricter than that of painting: the sequence of the strokes for a character cannot be changed, and there is always the most preferable sequence of the characters in composing a sentence. However, it is between the sequence of the strokes and the sequence of the characters that the master calligraphers still find ample space to express individuality through brush work. Similar to a painter's painting process, a calligrapher at the beginning of the writing cannot foresee the exact shape of calligraphy as an end piece. It is through his constant spontaneous control of the brush work that the writing takes shape. Once a work of calligraphy is finished, it acquires an originality that can never be replicated.

The art of calligraphy can be appreciated through spontaneity and individuality. Nevertheless, the discipline of calligraphy provides the basis of that appreciation, and the discipline is founded upon the concept of modularity - the combination of characters at large and of strokes that makes up each character in particular. Even in the case of painting where artistic spontaneity gives spirit to the work, the discipline of modularity is embedded subtly through the choice of subjects and the medium of representation. Similar principles can be detected in some of the Western modern paintings, such as those by Jackson Pollock and Brice Marden.

Left: Seal script, Deng Shiru (1743-1805), 31.3 x 16.2 cm, formerly collection of Zhou Peiyuan

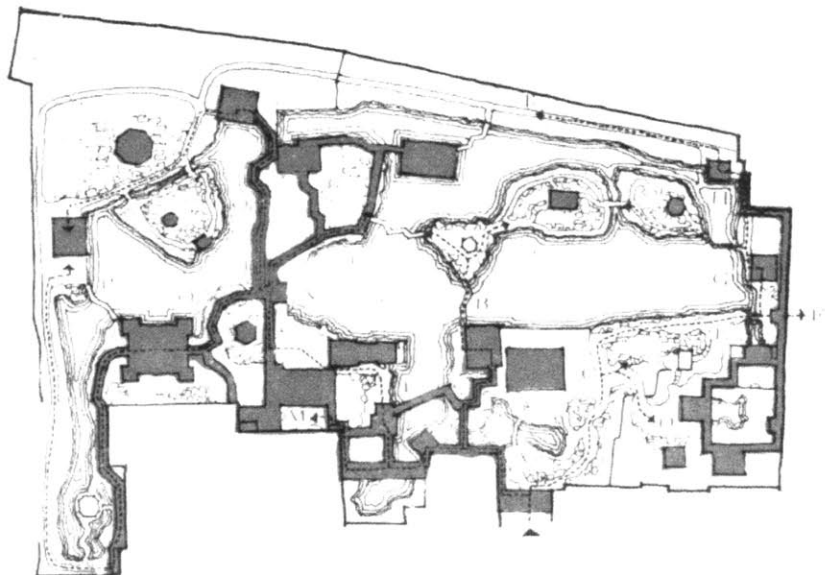
Right: Cursive script, Huaisu, Autobiography (detail), A.D.777, 28.2 X 755 cm, National Palace Museum, Taipei, Republic of China



## Garden

The design of Chinese garden shares the same fundamental principles as that of painting and calligraphy, where non-hierarchical spatial incidence is the result of transformation from the basic modular system - giving the design a dynamic and freedom that at the same time exhibits an embedded rigor of discipline. In *The Open Work*, an "Open Work" has multiplicity and plurality of meaning; it provides various visual devices for the observer's attention to focus on. He raises the example of the spatial sequence in Baroque architecture as coherently conform to the nature of the notion of the "open work". He describes that the spatial experience in Baroque architecture is dynamic, is about indeterminacy and incidence, which denies privileged frontal view. Quite coincidentally, the exact same description can be applied to the spatial experience inside the traditional Chinese garden.

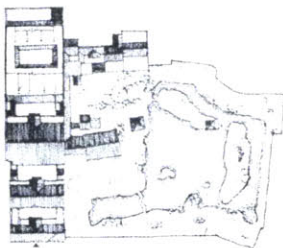
*Zhou Zheng Garden, Plan, Suzhou, Traditional Chinese Garden, Beng, Yigang, Chinese Architecture Press, Beijing, p.72*





Views inside the garden,  
photo taken in 2002

Gardens in the city of Suzhou in south-east China are peaceful small worlds hidden inside the noisy city. They were the creation of literati class, places where they enjoyed the rest of their lives after retired from officials. Most of the literati were poets, calligraphers and painters at the same time. The garden have been designed and made by the joint talent of literati and the craftsman. Nature has been the major source of inspiration in literati poems and paintings. The concept of making garden is the same as that of the poetry and painting – to create the impression of nature. In making the garden, the layout is never symmetric and the path never straight. It is hard to find an occasion where a window or a gate that is not a frame of view. Inside every frame, the view is just like that in a painting. Because oftentimes, the perception to nature is acquired through indirect access to nature, the light in space, in most cases, is indirect and reflective. Layers of spaces infiltrate and float through openings of different shapes, among the pavilions, waters, piled stone mountains and sinuous ancient trees. The view changes along every movement of one's step, and the experience is one of constant discovery. In a garden of a limited size, the nature one can sense is infinite.

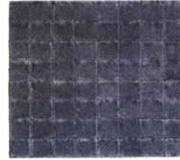


Bi residence, Suzhou,  
Traditional Chinese  
Garden, Beng, Yigang,  
Chinese Architecture Press,  
Beijing, p.8

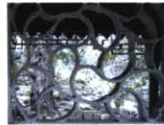
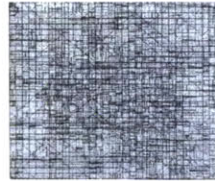




行田密強行之可收存黃庭  
而能無間後之圖標：丹田  
此畫抵此不復中此有上  
外相徑重周之神廣之中  
因于精以自持也中有士常  
大尺約其上下強守之可無  
整身成處方寸之中謹立



一、二、三、四、五、六、七、八、九、十、十一、十二、十三、十四、十五、十六、十七、十八、十九、二十、二十一、二十二、二十三、二十四、二十五、二十六、二十七、二十八、二十九、三十、三十一、三十二、三十三、三十四、三十五、三十六、三十七、三十八、三十九、四十、四十一、四十二、四十三、四十四、四十五、四十六、四十七、四十八、四十九、五十、五十一、五十二、五十三、五十四、五十五、五十六、五十七、五十八、五十九、六十、六十一、六十二、六十三、六十四、六十五、六十六、六十七、六十八、六十九、七十、七十一、七十二、七十三、七十四、七十五、七十六、七十七、七十八、七十九、八十、八十一、八十二、八十三、八十四、八十五、八十六、八十七、八十八、八十九、九十、九十一、九十二、九十三、九十四、九十五、九十六、九十七、九十八、九十九、一百



Left: Images of traditional Chinese artifacts that reflects the concept of Yin-Yang.  
Right: Paintings and drawings of Brice Marden based on Chinese cultural images.



Yin-Yang seal

## Yin-Yang Concept

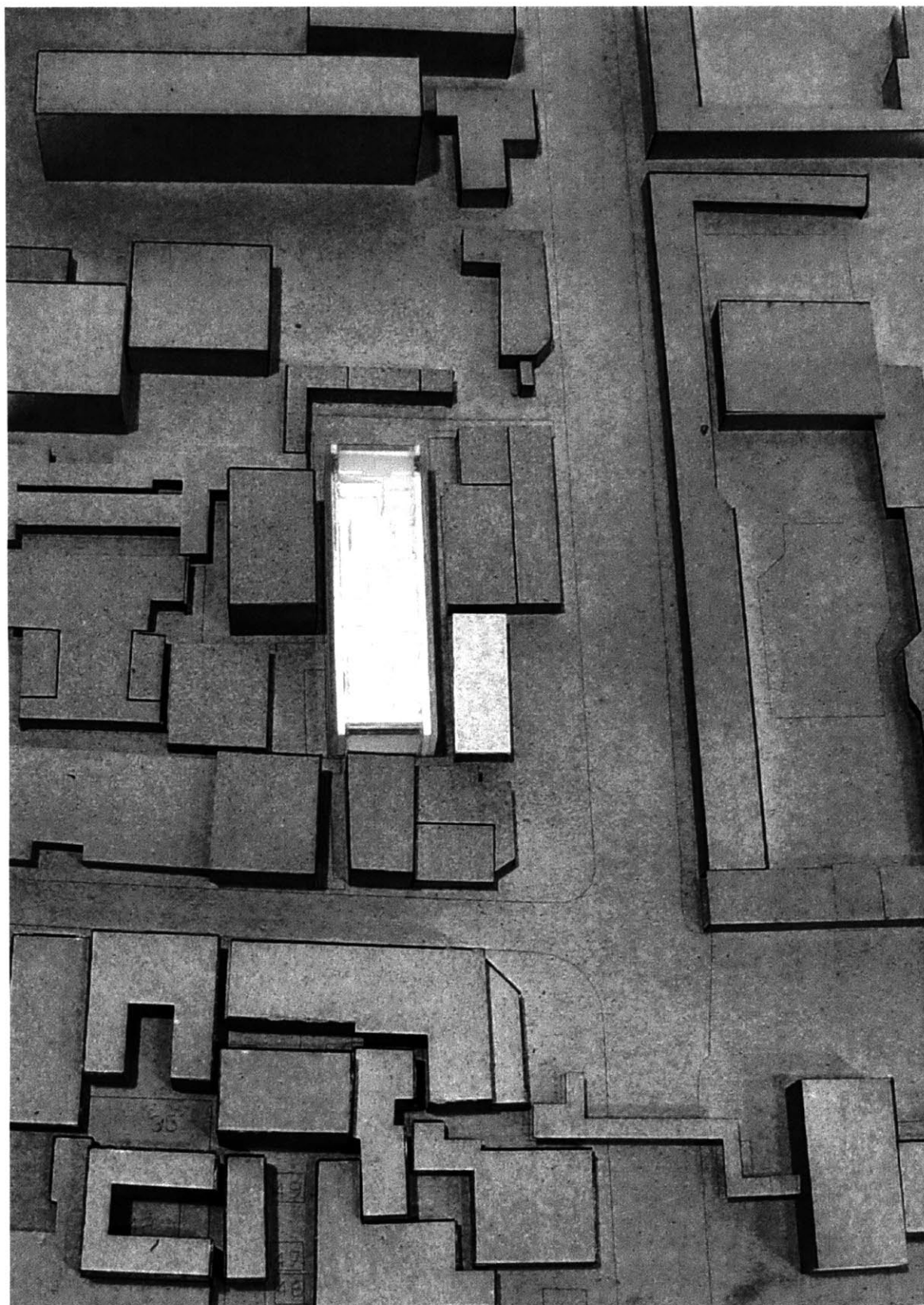
### *Yin-Yang in fusion -*

The module strategy in the art of making has resulted in a particular formal expression in many traditional Chinese artifacts that is considered to be reflective of Yin-Yang concept. Yin and Yang are two fundamental elements that are generated by Tao, and only the interplay and the balance of Yin and Yang can generate things that conform to the rules of nature. The arts are the most direct reflection of this ancient theory. The image of an epitaph gives the impression that contained in a frame, it does not have a focus point, or a clear distinction between the foreground and the background, that the space tend to be evenly divided by the solid, resulting in a fairly balanced and interchangeable positive and negative composition. The same images can be found in the composition of city plan in imperial Chang An, the display shelf for vases, the window mullins in the garden, etc. The fact that the foreground and background are interchangeable brings about the notion of "blur", a kind of blur in perception that is a frequently explored subject in modern art.

### *Yin-Yang in compliment-*

Authentic seal always comes in a pair, one with the strolls of the character carved out, one with the space in between the strolls carved out. The pair is called a Yin-Yang seal. The juxtaposition of the Yin seal and the Yang seal is considered to be representative of the core of the Chinese philosophy: Yin is the principle of darkness, negativity and femininity. Its counterpart, Yang, is the principle of light, heat, motivation and masculinity. The dual, opposite, and complementary principles of yin and yang exist in the varying proportions in all things.

The fact that there is a link between the concept behind ancient Chinese arts and the western modernist thoughts suggests that some Chinese traditions are essentially *modern*. In other word, the modernist principles had already embedded in the Chinese traditions, thus the design strategies are capable of arousing cultural resonance with the western counterpart. An essence of the thesis is to explore how these strategies can inform the design to create architecture that is modern, yet at the same time Chinese.

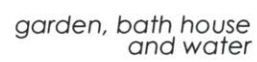
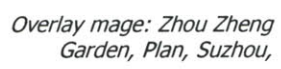


## the basics of bathing

In a dense urban situation where people get tired of the pressure and the restlessness of daily life, both the bathhouse and the garden are places for people to seek a moment of tranquility, a moment of the transcendental unification of body and mind, and a feeling of returning to the nature. The contemplative experience offered by a bathhouse or a garden is indispensably associated with the presence of water. In a garden, the serenity of water and the void defined by its surface are essential elements around which different point of views are situated. Water in a Chinese garden is predominantly a visual element symbolizing lakes in nature, together with rocks symbolizing mountain, the man-made landscape in a city garden expresses the belief in Chinese that mountain and water are eternal, and landscapes reveal the extreme beauty that transcends the changing world.

The experience of water in a bathhouse is different. It is through the contact between human body and water that sensuality is revealed. There are two experiences of bathing that I would consider great luxury. One is to bathe in a space that has spare light, in the darkness where one sees only vaguely one's body and a few light columns through the rising steam; in a space where everything else is dematerialized in the darkness except for the light shaped by the steam and dimly reflected by the water. The other experience is being naked, to bathe under the sun, feeling that I absolutely own that piece of sky above, that body of water around and the piece of earth underneath. I believe spaces with such pure presence of light and water provides the moment of tranquility when architecture is able to transmit the feeling of sublime, not just beauty; it is the moment when bathing is not only for cleansing the body, but also the mind.





## site & program

*Liu Lichang - Thesis project site, the existing bathhouse located at the intersection, photo taken in 2002*



The site is similar to the one in the film. It is comprised of densely built traditional courtyard houses alongside a well-known historical pedestrian street in the heart of the neighborhood. The street, called *Liu Li Chang*, is a historical attraction well-known for its numerous collections of antiques, traditional paintings, calligraphy, seal stones as well as workshops of various specialties related to the traditional culture. It has a history of more than six hundred years. The interstitial spaces between the buildings, called *hu-tongs*, are another spatial feature of the site. Due to their degrading conditions, a lot of the courtyard houses in the neighborhood are unfortunately under demolition. While the façade of the shops along *Liu Li Chang* have a rather homogenous appearance, each door, open or semi-open, leads to an interior of rich display, where one finds numerous amounts of things related to the traditional culture. Occasionally, the street opens up to a *hu-tong* on the side, the interstitial space leading to the residential neighborhood made up of mostly one-story courtyard buildings.

The existing bathhouse occupying the site was built in 1960s when the socio-political ideology of China (the regime of Mao and the Cultural Revolution) privileged functional necessity. The thesis proposes to demolish the existing building and construct a new one that accommodates the existing programs.

The program is a public bath house that contains both women and men's spaces. A tea house that will occupy the existing parking lot facing the street is proposed to be designed at later stage. The total square footage of the bath house is 17000.

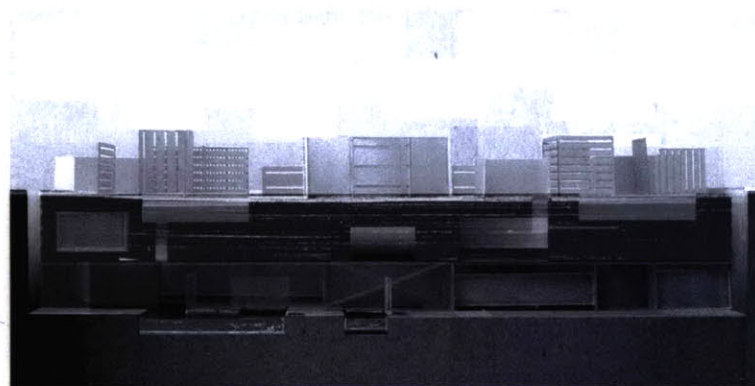
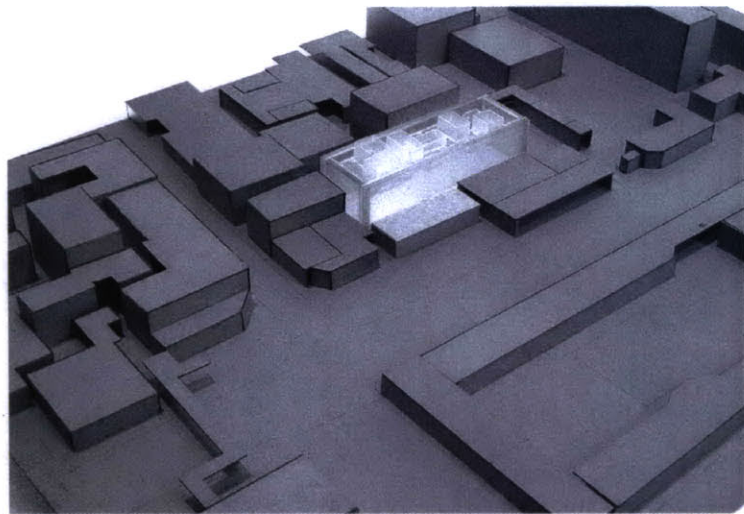
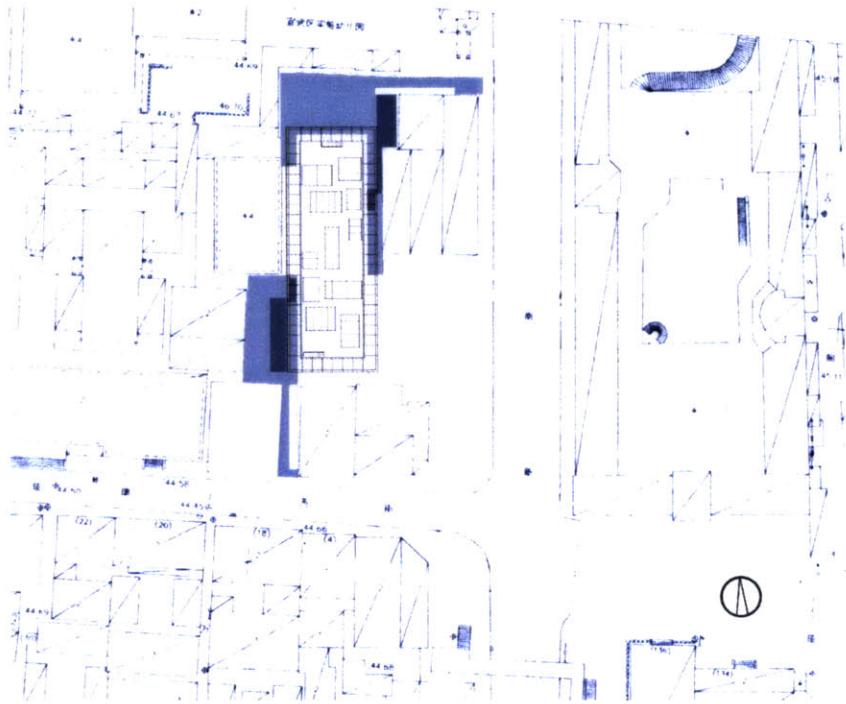


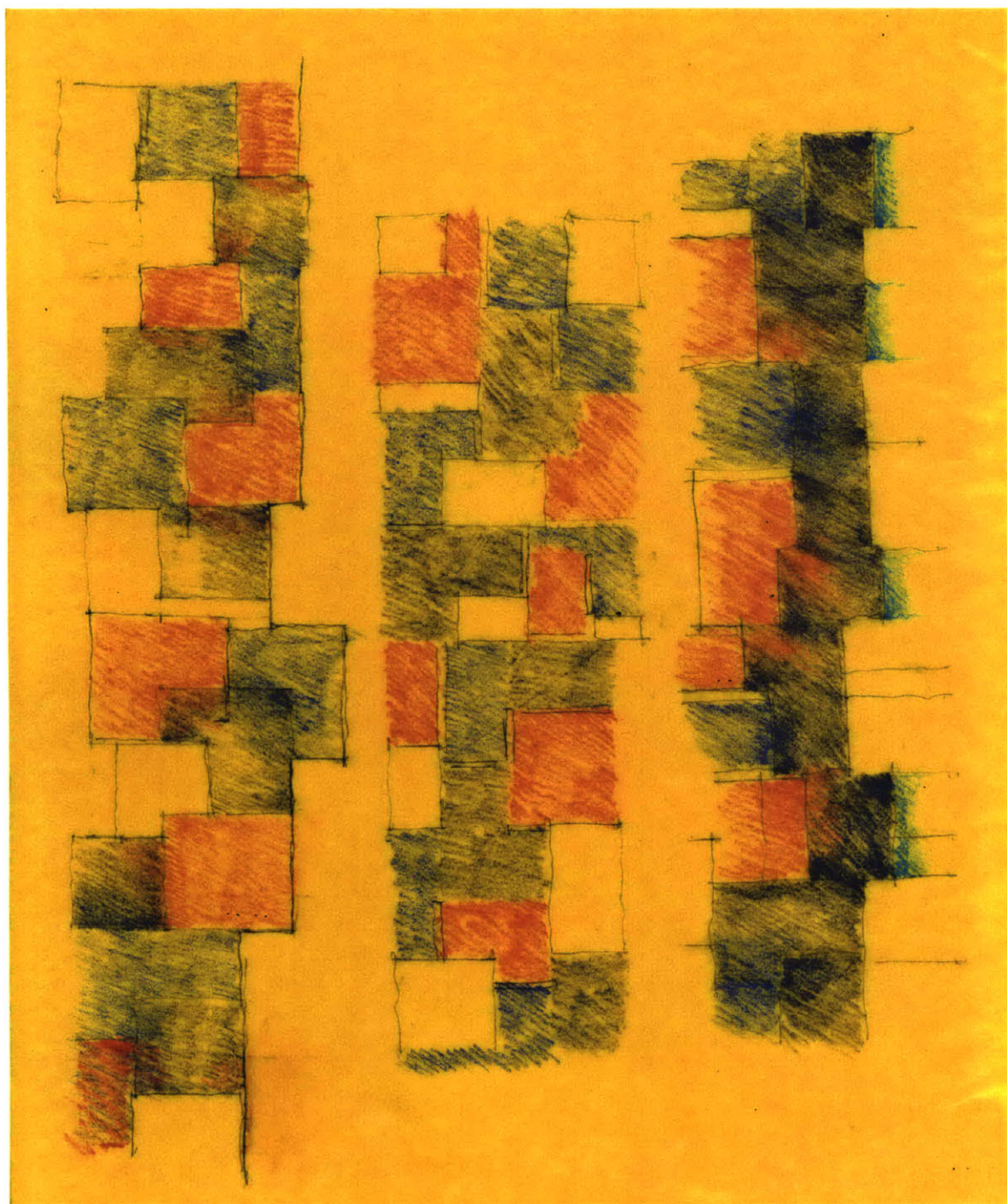
door, interior and hutong  
--impression of the street

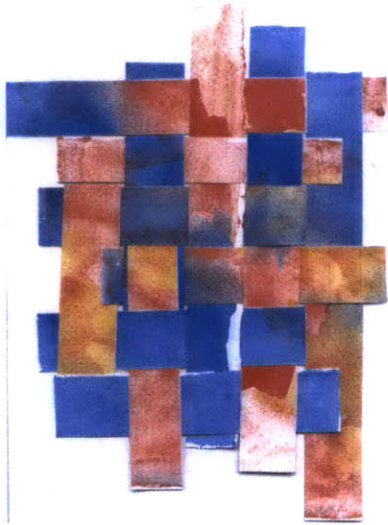
## building and space

The existing bathhouse is a four-story building. Its main entrance orients towards a parking lot that faces the major north-south arterial. In the proposed scheme, the parking lot is replaced with a teahouse to be designed at a later stage. In replacement of the more formal, single entrance, there are two entrances to the new bathhouse – one for men and one for women. The entrances can only be accessed from the interstitial *hu-tong* spaces in between the surrounding buildings, giving the building a more intimate character and more embedded in the context of the neighborhood. The entrance level is submerged one-storey below the ground so that the spatial sequence – the transition from darkness to lightness – is choreographed.

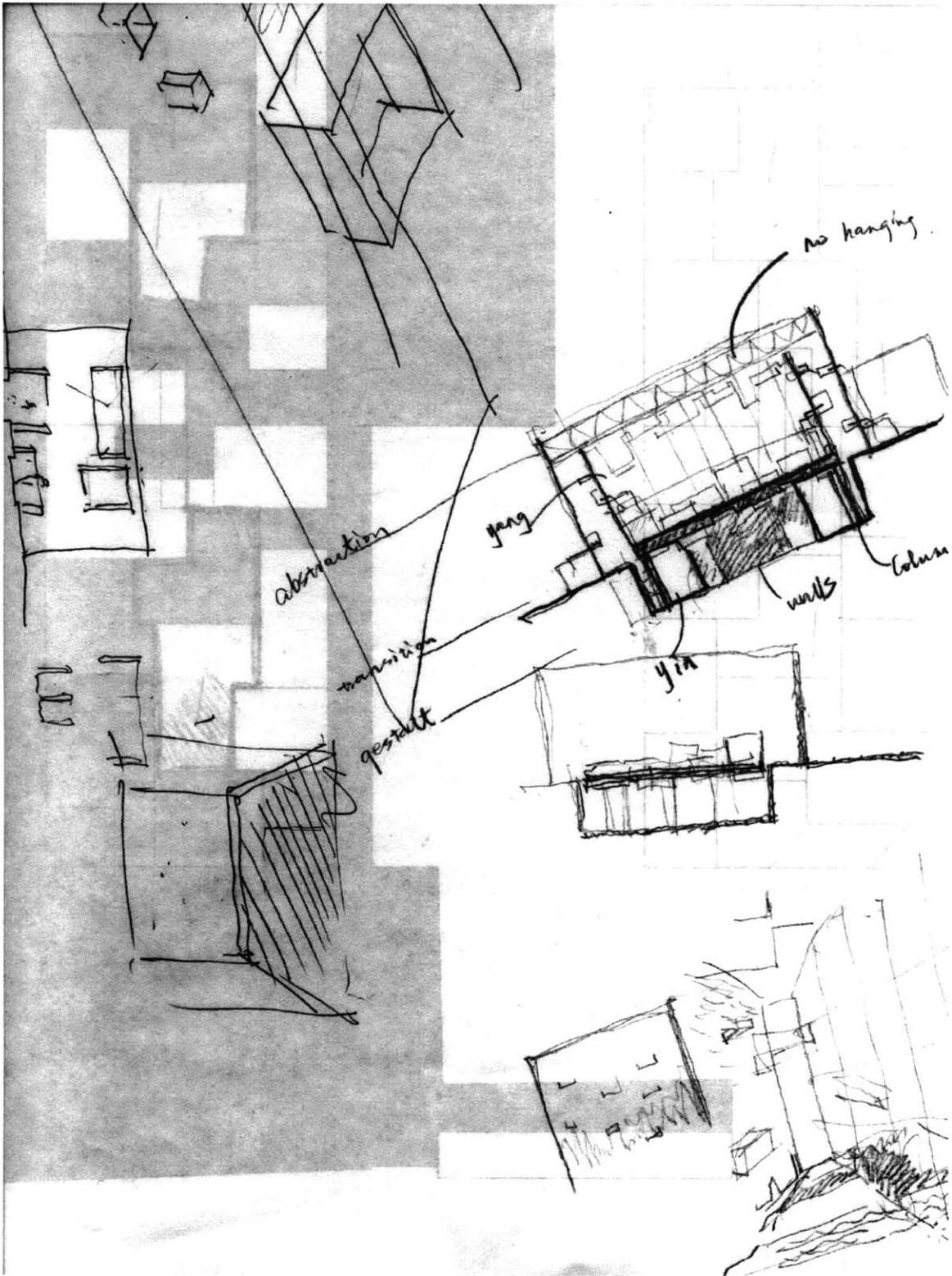




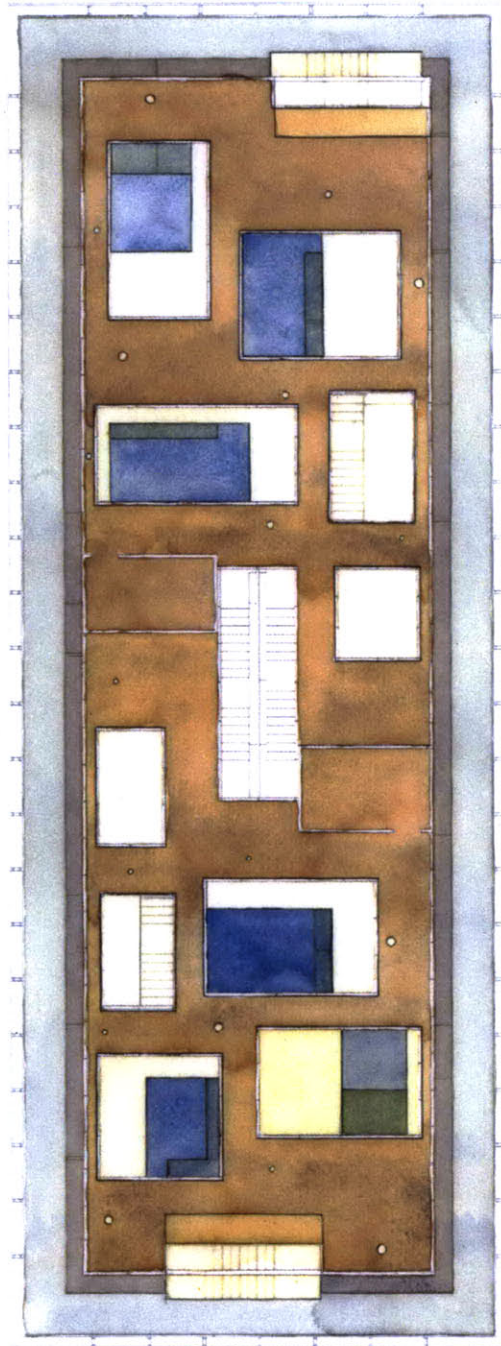




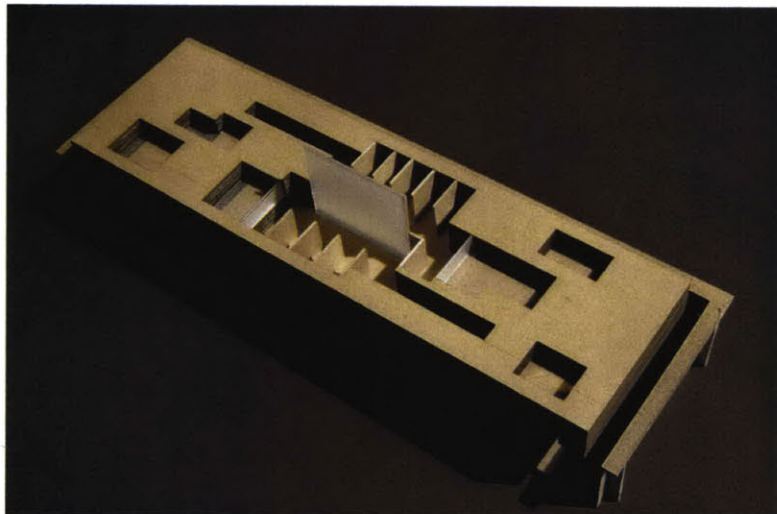




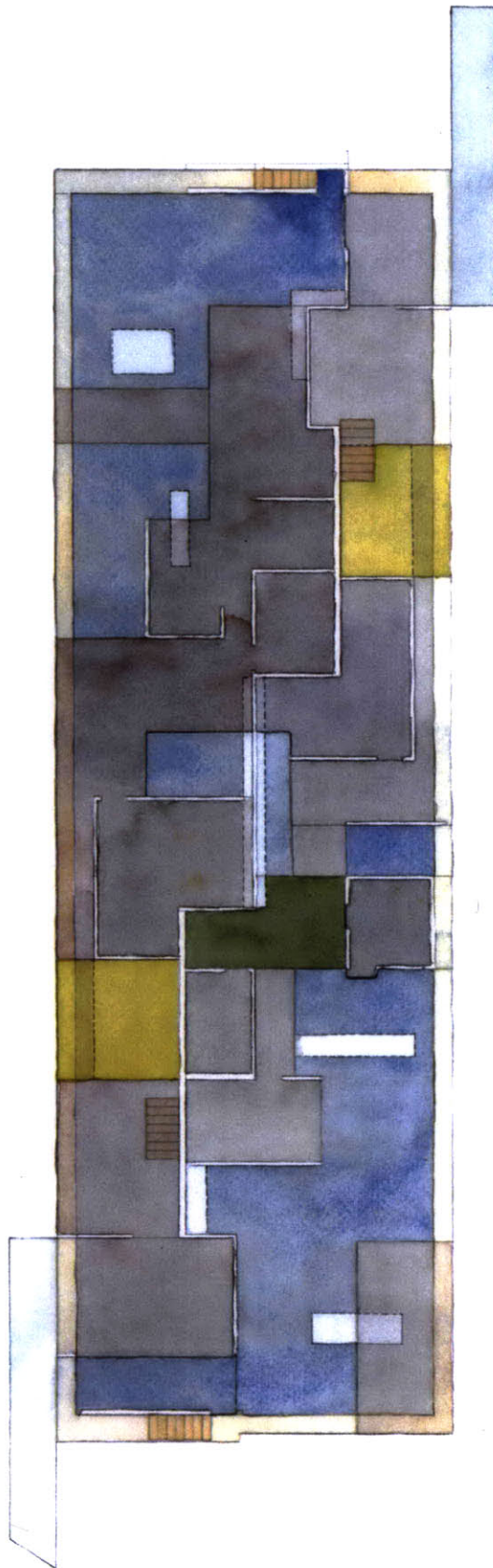




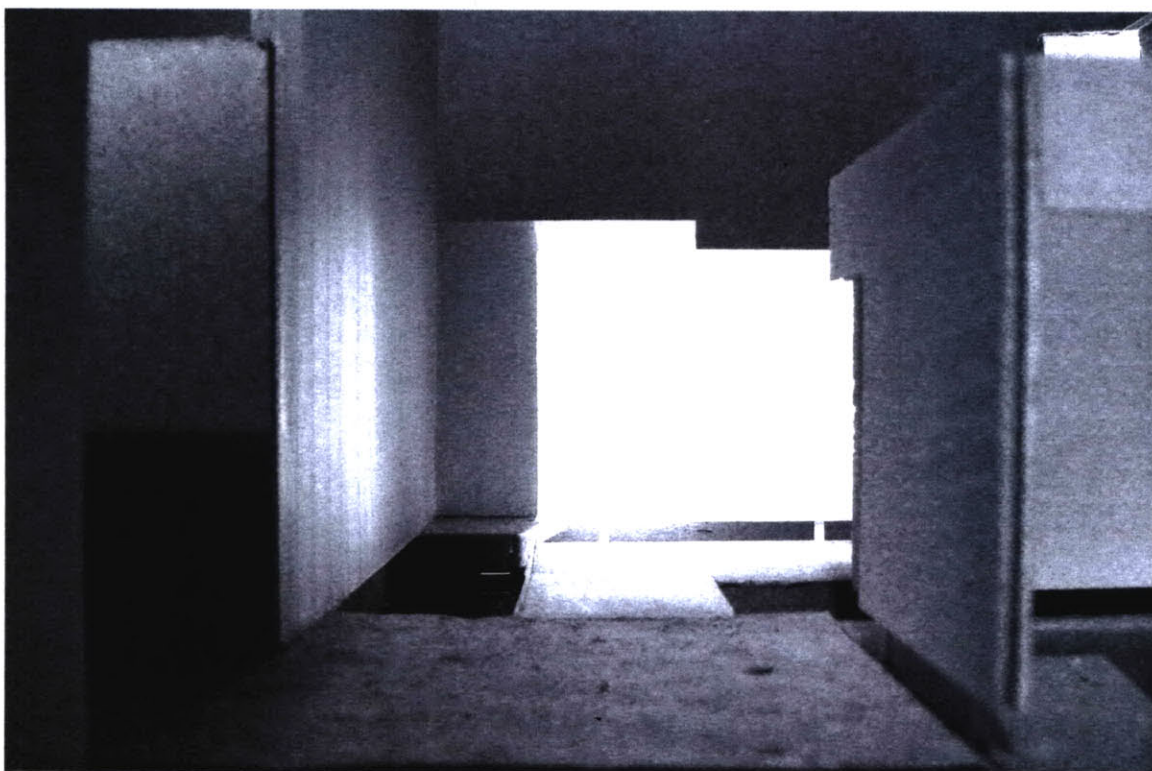
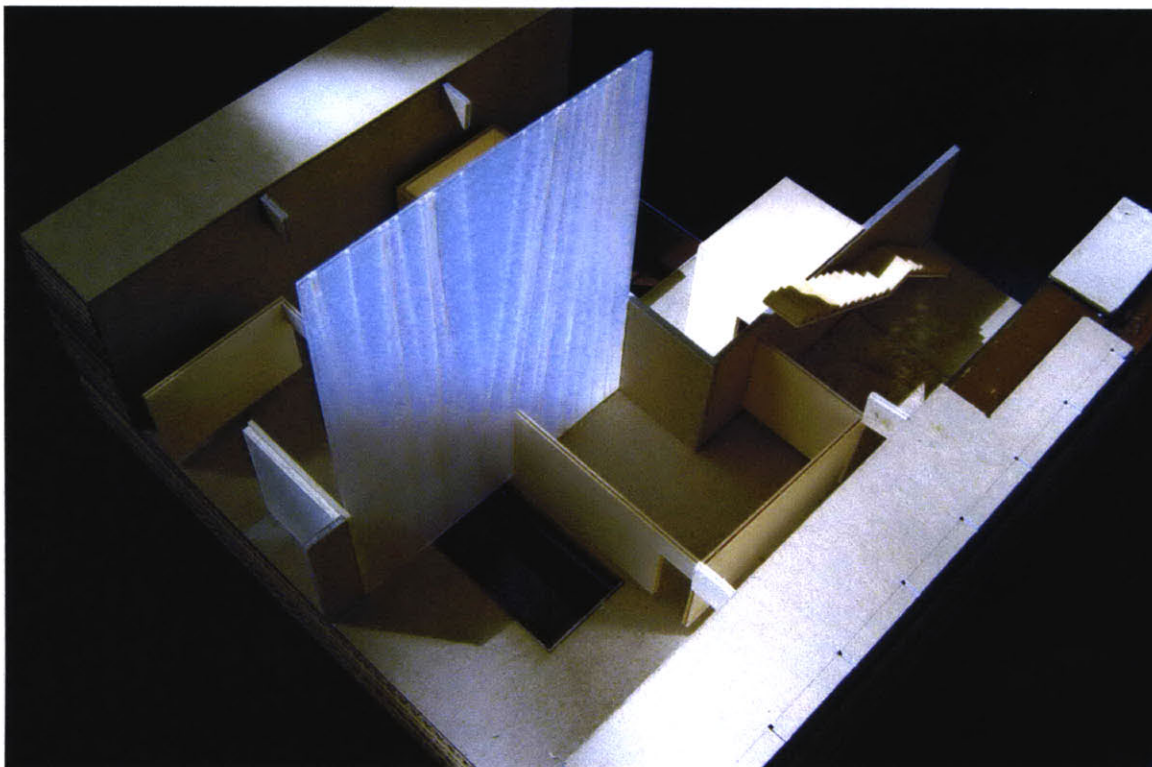
The design is an attempt of synthesizing different issues, namely, the configuration which is the metaphor of the garden and the memory of the culture, the concepts of yin-yang and modularity, the spatial order of man and woman, the sensuality and physicality of wetness and dryness, etc. The larger design framework evolves from the basis of bathing - the theme of earth, water and light. It is imagined that a thick layer of earth is lifted up and divided the building in two spaces with distinct characteristics, and modulates the experience of moving in between brightness and darkness.

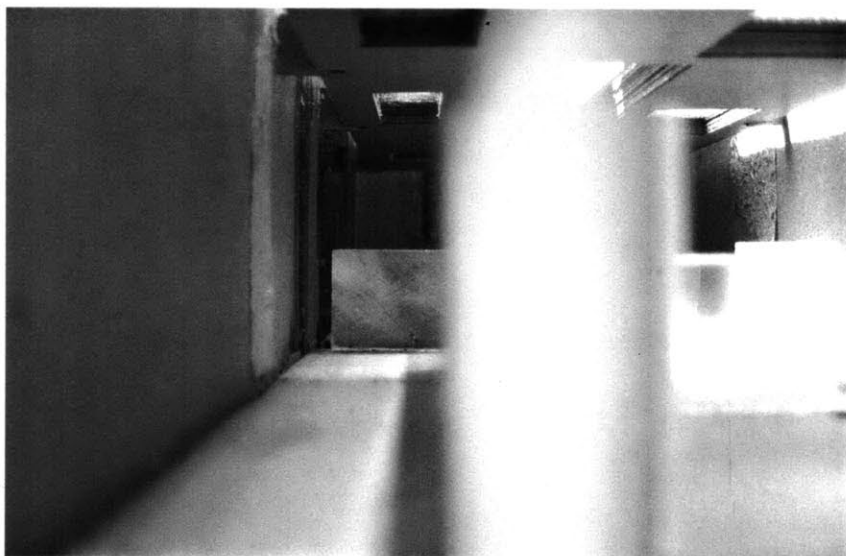


The underground houses larger, communal, bathing pools. From either entrance, one enters into a dark space where the light is spare, water flows down along the wall and vegetation creeps up to create materiality that brings sound, different reflectivity into the space. The partitions are arranged in such a way that they are low and scattered so that the space is floating and the continuity of the ceiling creates the perception of a larger, unifying space.



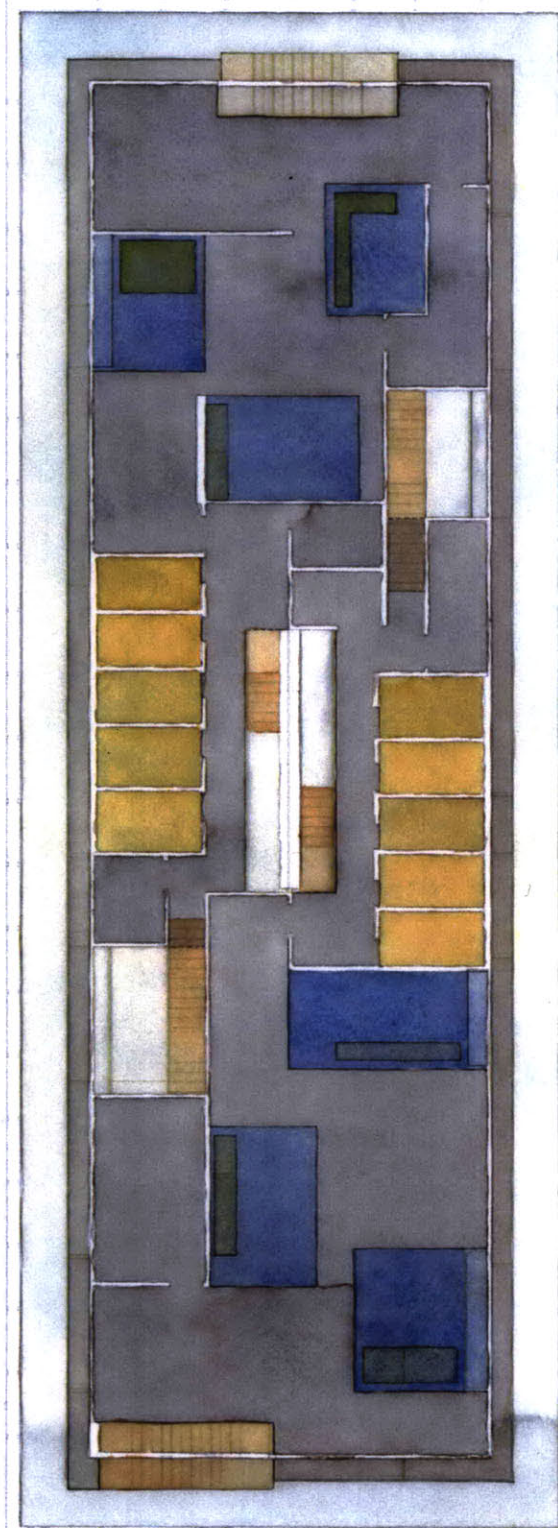


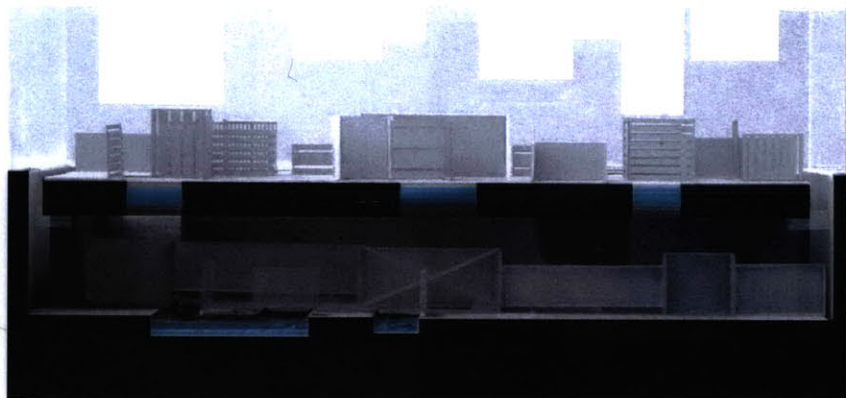
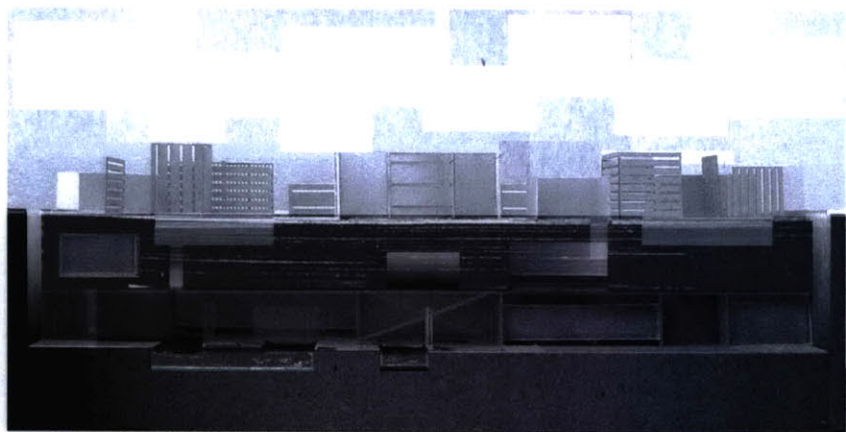
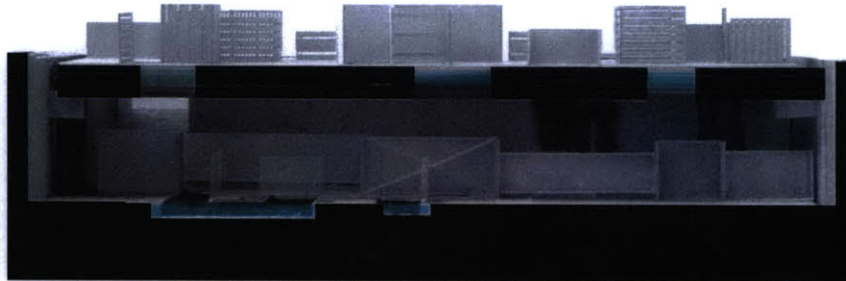
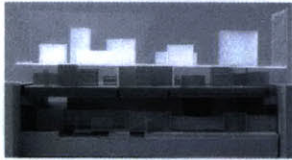
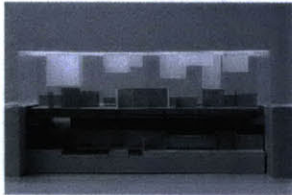


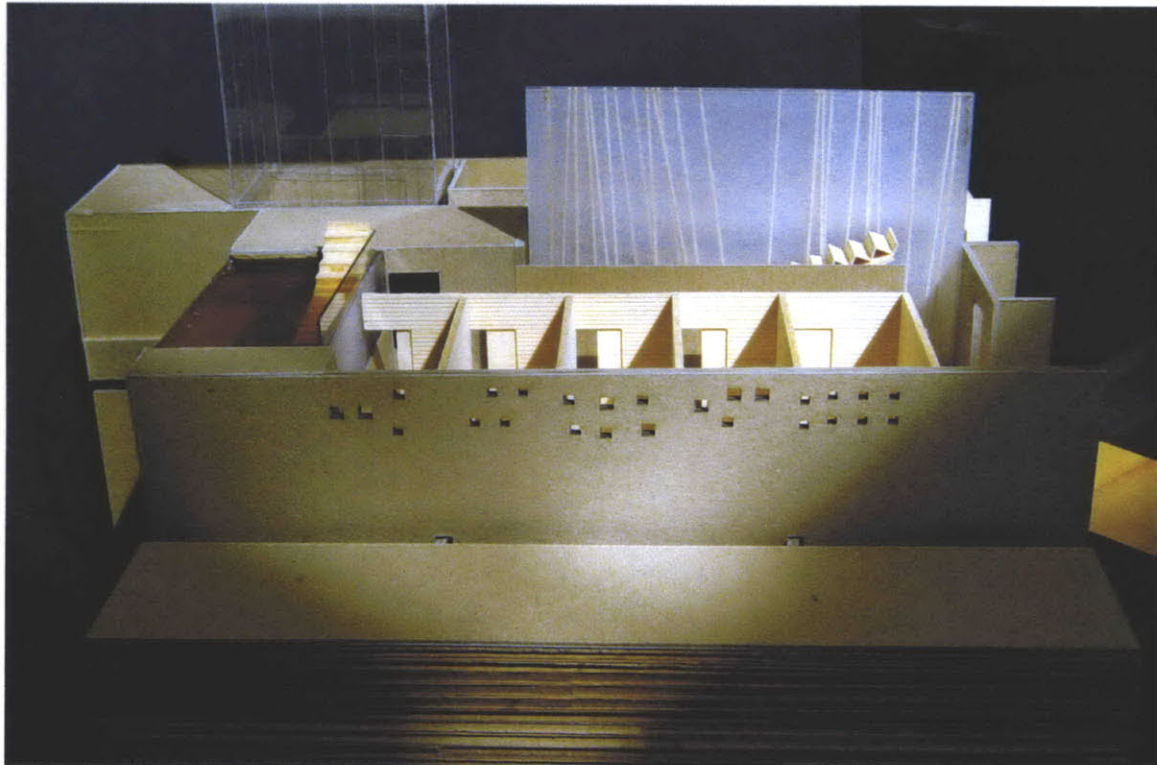
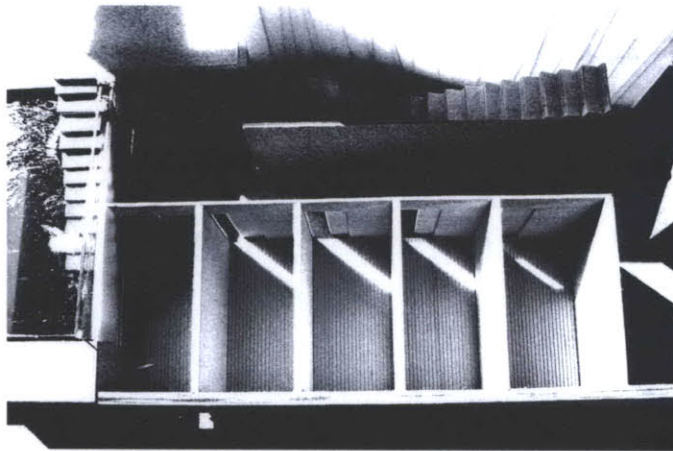
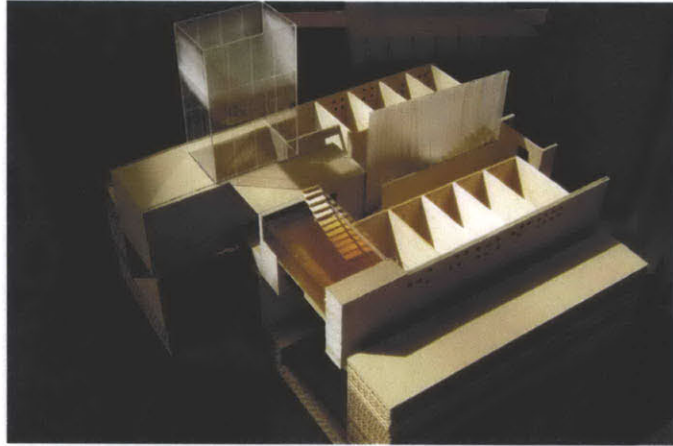


In between the lower bathing level and the upper bathing level, there are transitional spaces embedded in a 12' thick, solid, uplifted slab, which is a metaphor to the conceptual image of floating earth layer. The slab houses small steam chambers, and a central staircase where both men and women can sense each other's presence without physically come in contact with each other. As a transitional zone that mediates between the lower level and upper level, there are moments where the solid layer grows up into the upper, brighter space above to create a few spots of darkness, and the upper space, in the form of glass chimneys to be discussed in the next paragraph, pierces down into the underground to create a few spots of brightness



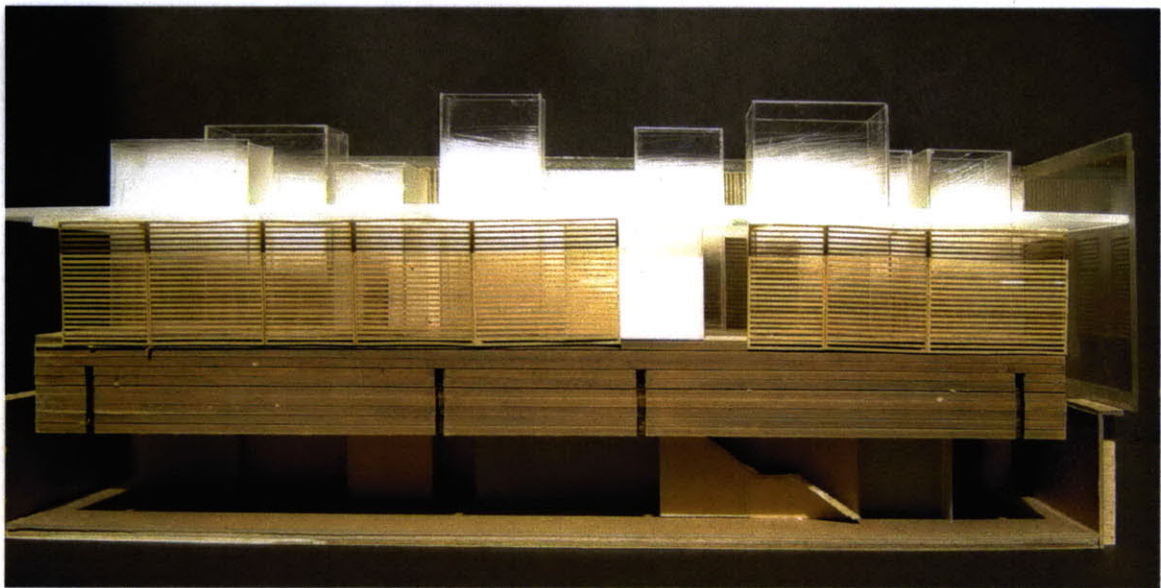
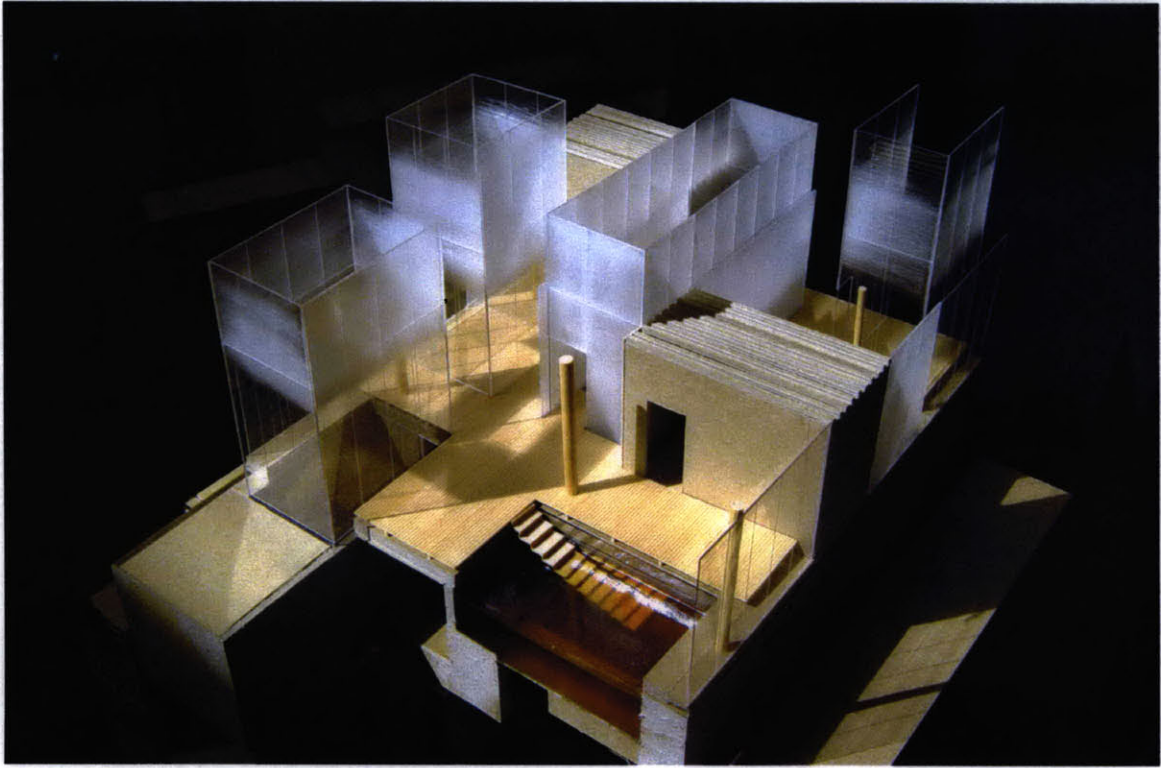




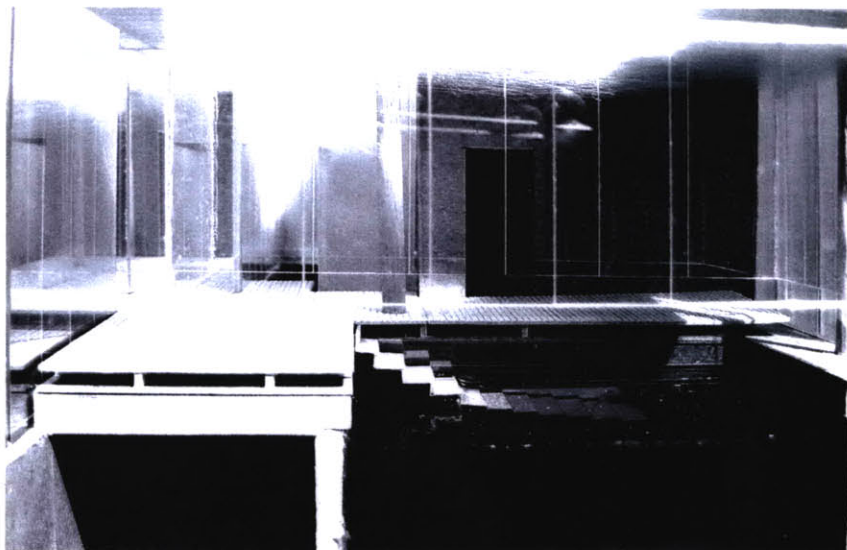
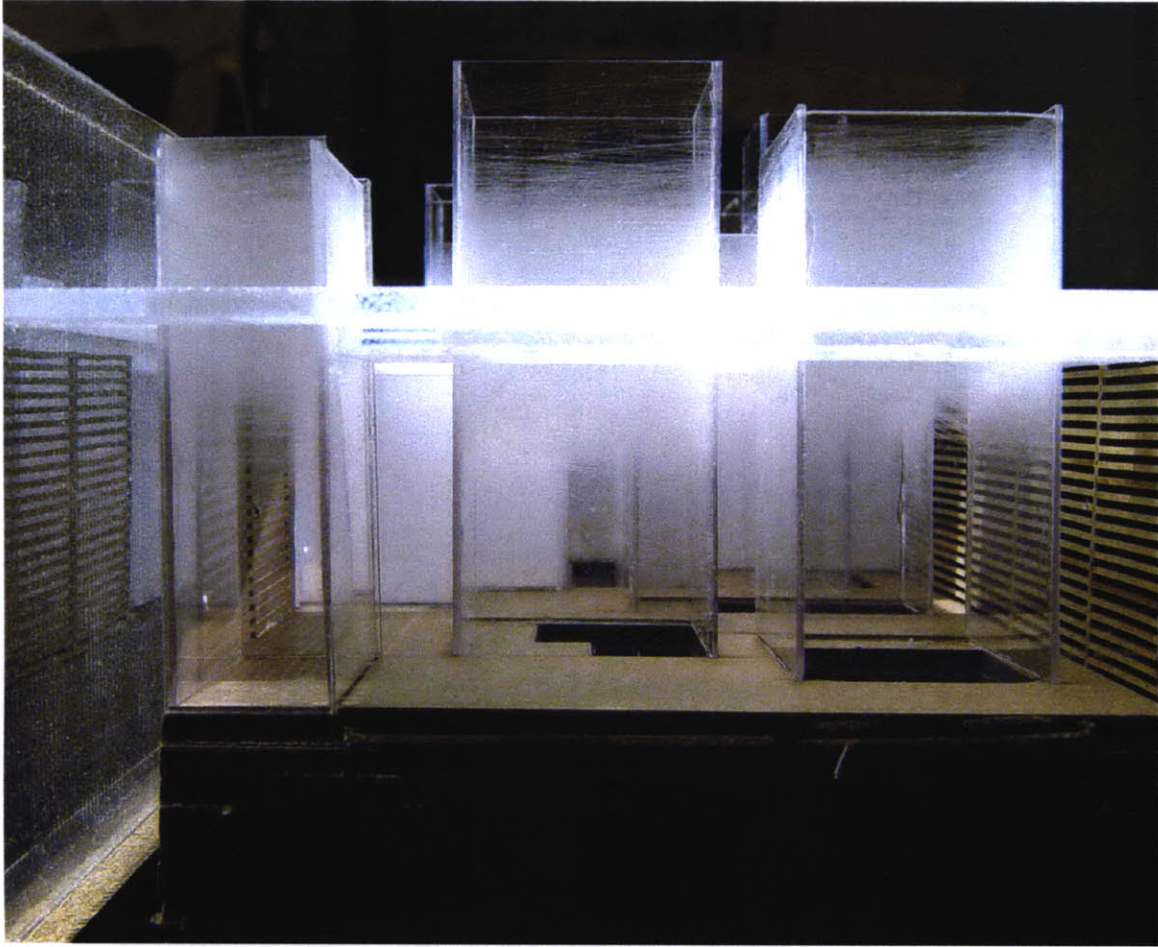


The upper bathing level have small-scaled and more scattered bathing pools enclosed in glass chimneys that protrude through the roof. In contrast to the material palette of earth and concrete that gives the lower level a sense of darkness and heaviness, glass is the predominant material used in the upper level. When the pools are being used, steam fills up the chimneys and transforms them into translucent volumes and creates a different, more ephemeral, kind of intimacy. In this sense, the glass gives form to steam, and transforms steam into a sensual architectural material.



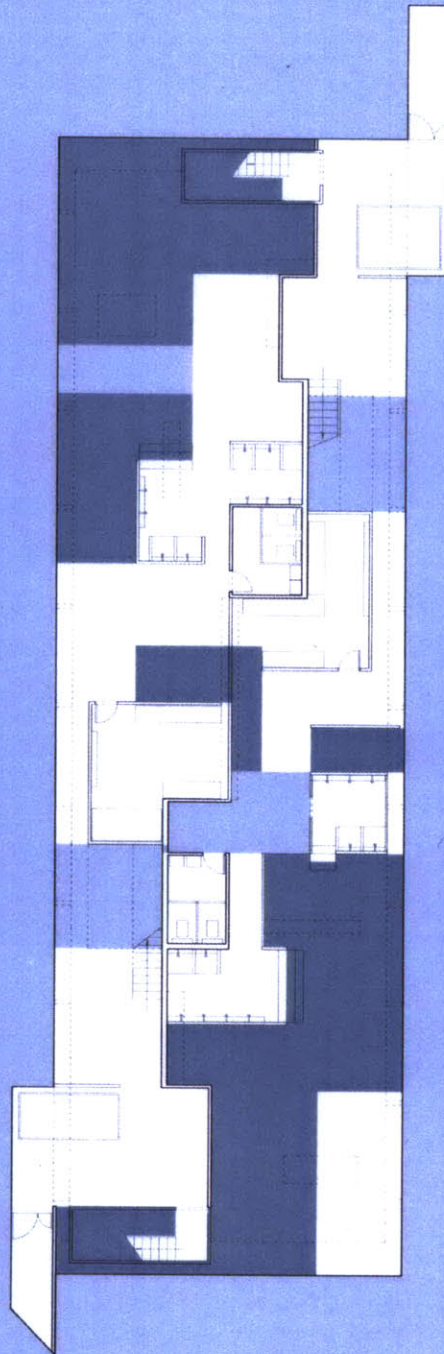




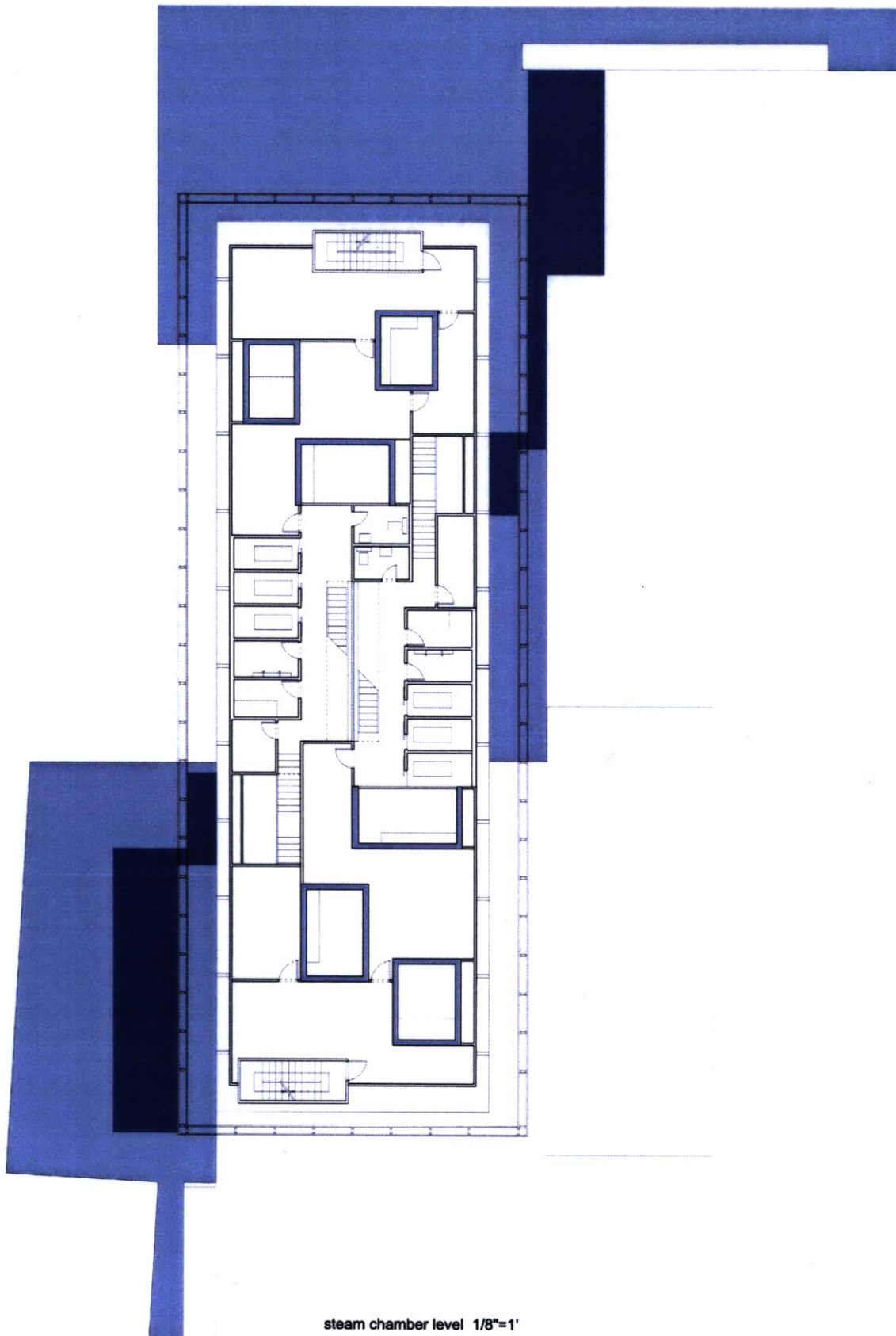


The central staircase that punctures through the floating slab stops at the upper bathing level, and is replaced by two staircases at the far ends of the building. These staircases lead towards the roof terrace, where the glass chimneys are inverted from intangible voids of steam in the upper bathing level into tangible sculptural elements – a manifestation of the yin-yang concept.

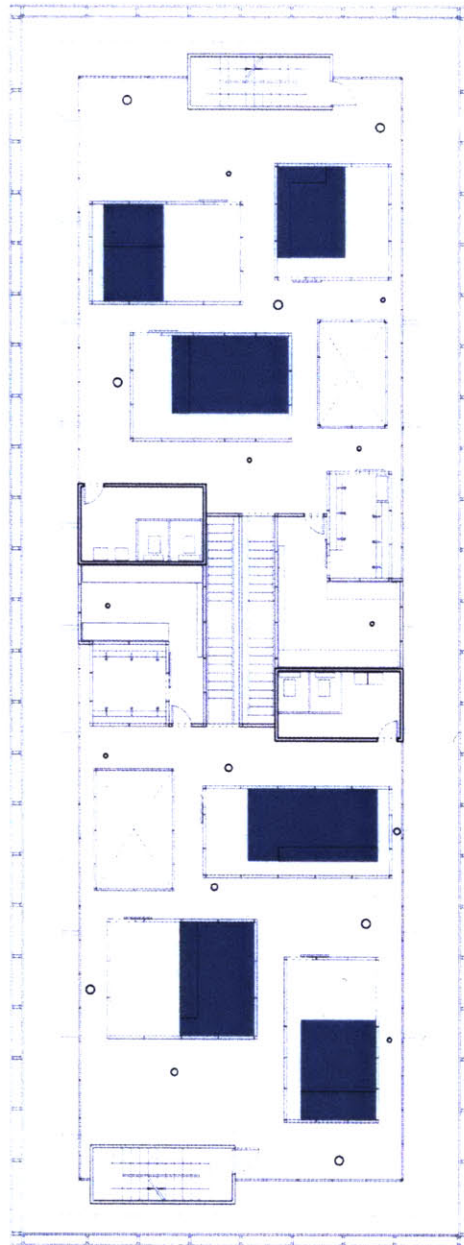




underground bathing level 1/8"=1'

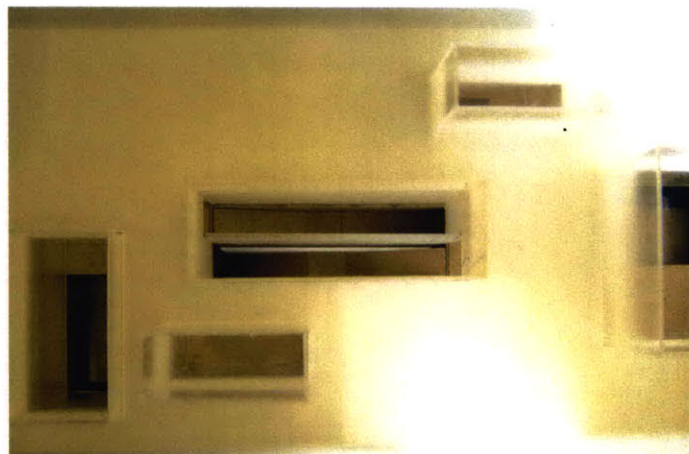
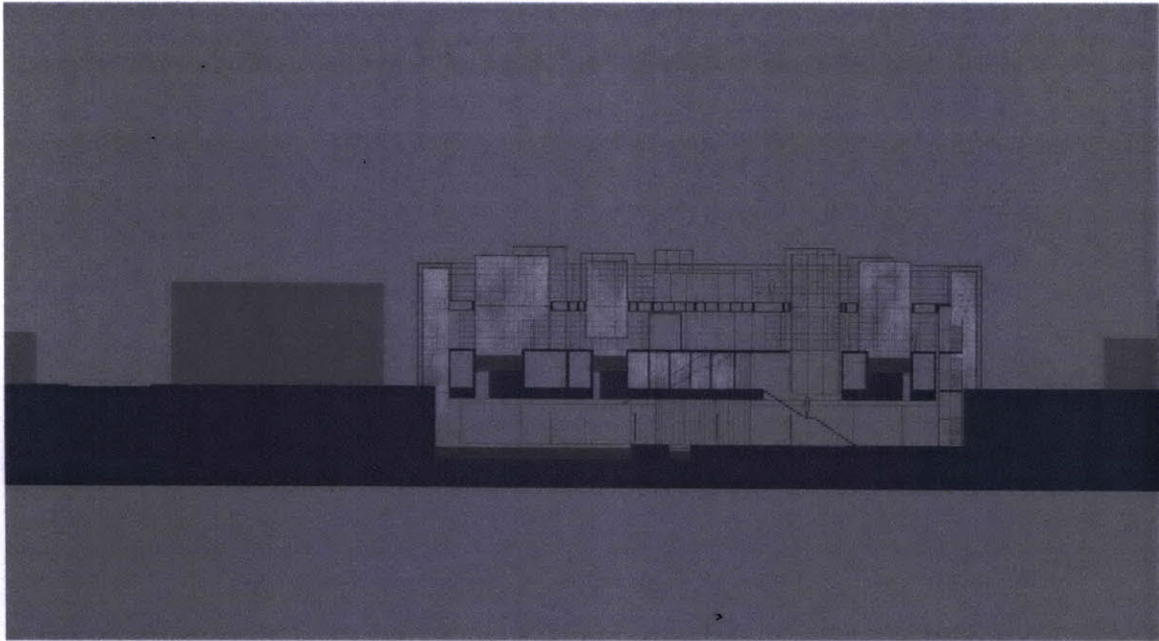


steam chamber level 1/8"=1'

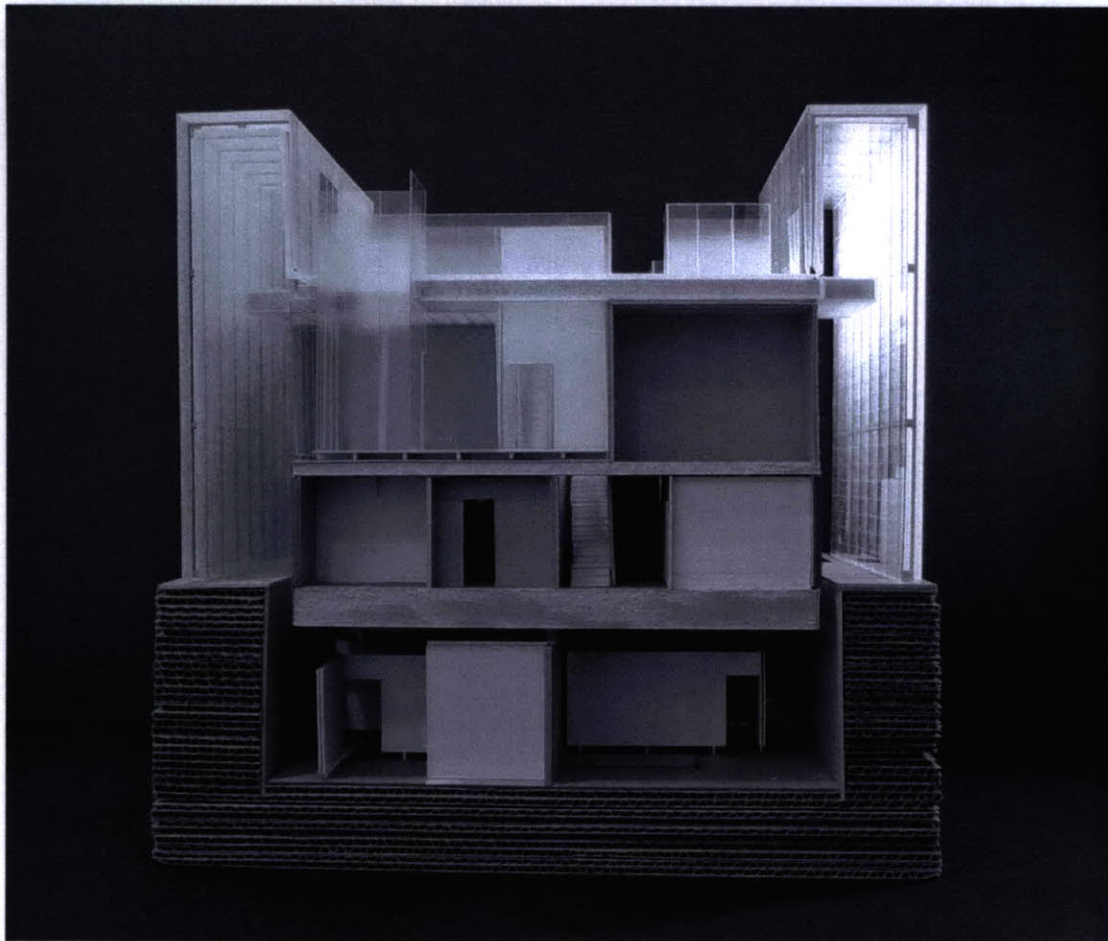
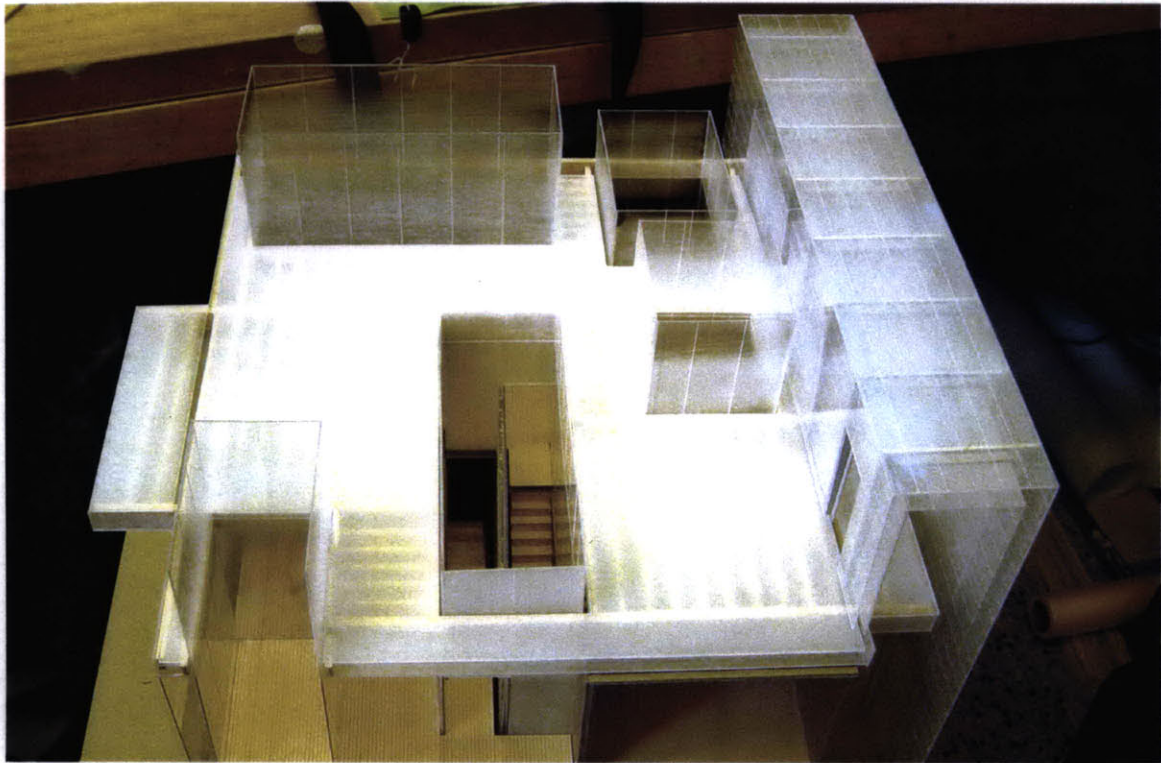


upper bathing level 1/8"=1'

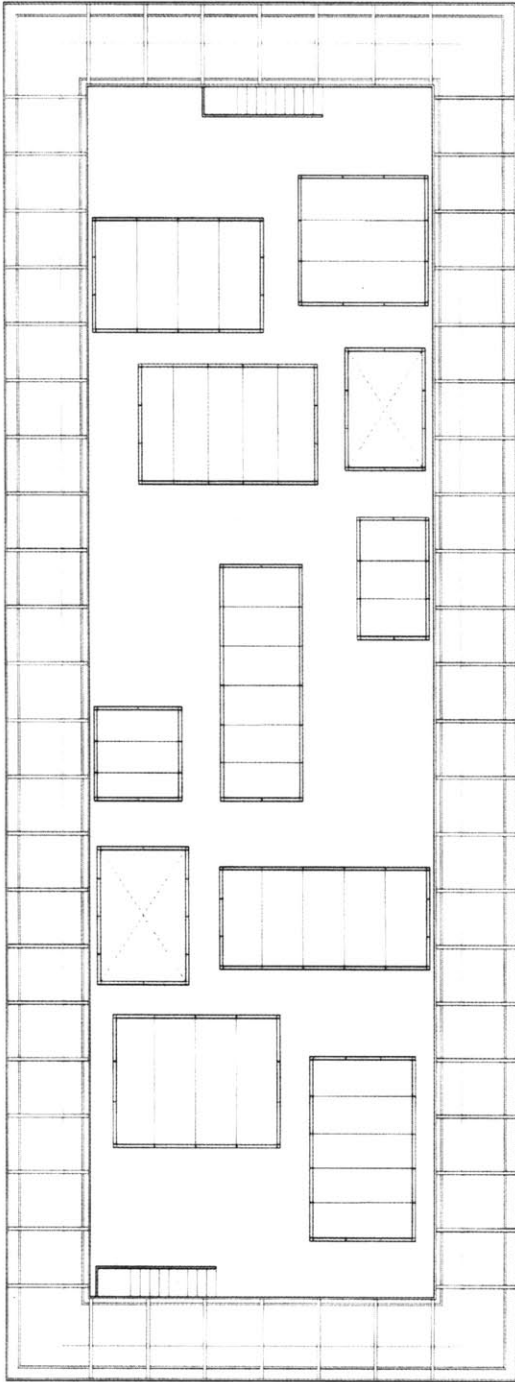




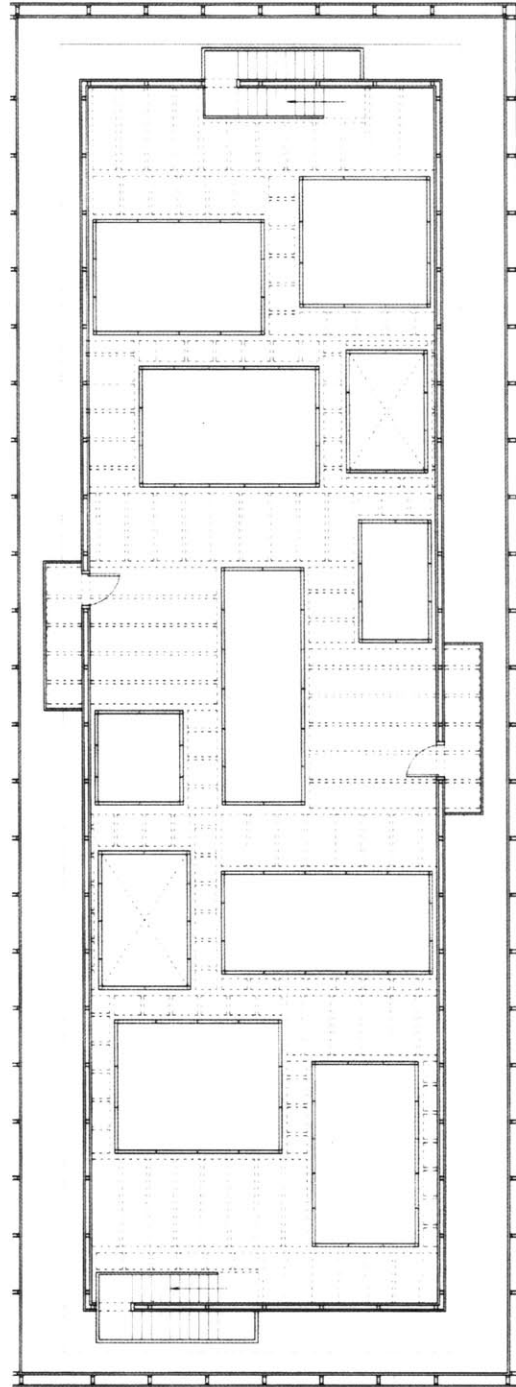




From the roof terrace, one can access and thus occupy the space in between the façade and building interior, again another interstitial space that speaks the concept of veiling. To echo the concept of the steam chimney, and also to emphasize the role of the façade as a veil, steam from the steam chambers is fed into this interstitial space. The façade then becomes a space that announces the presence of human occupation.



roof top level 1/8"=1'

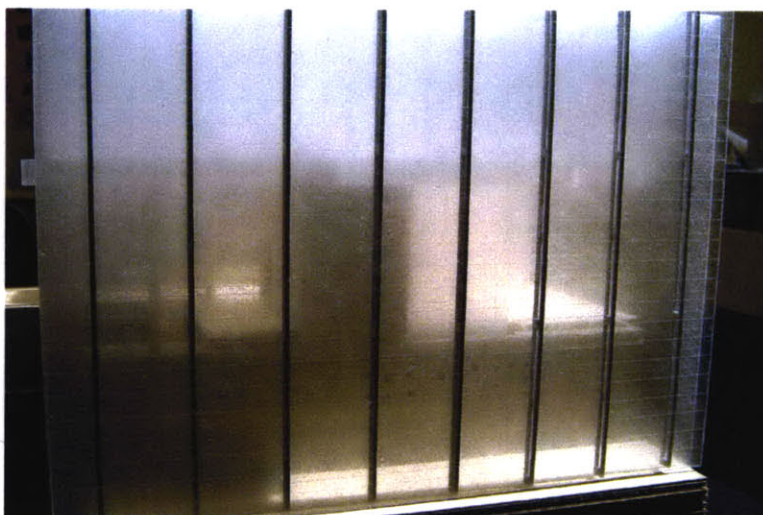
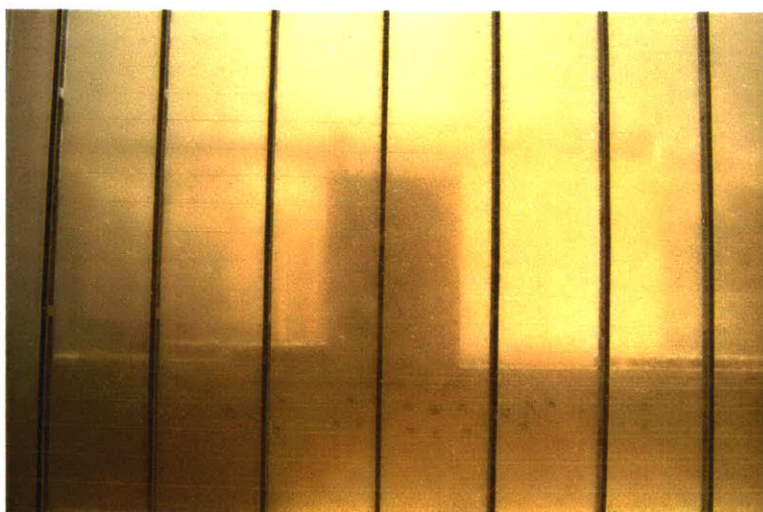
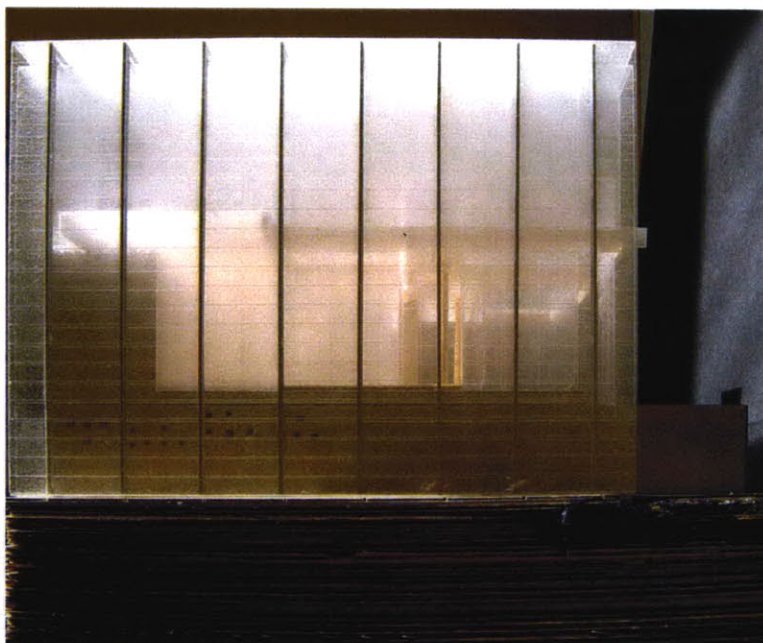
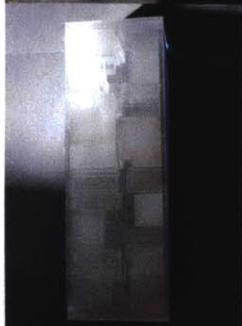
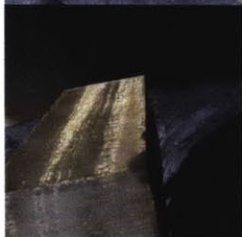


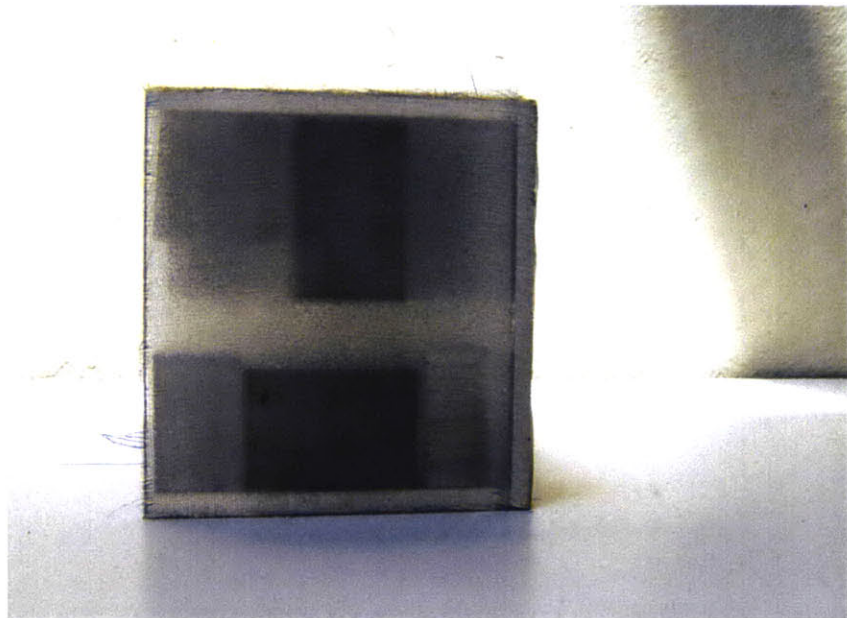
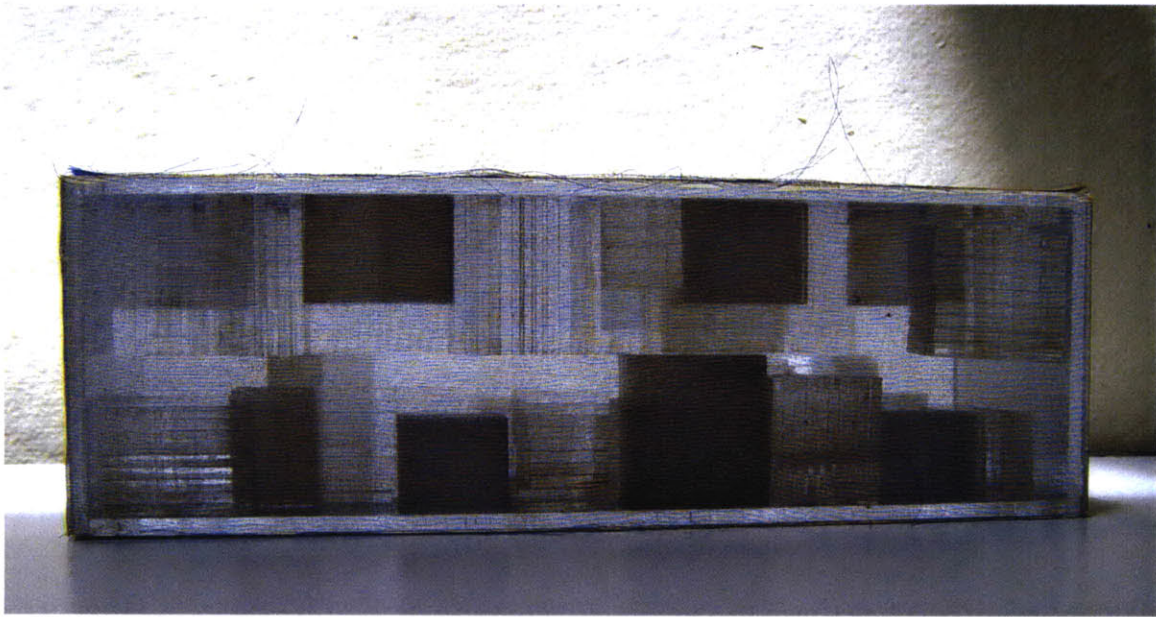
roof terrace level 1/8"=1'

the concept of veil

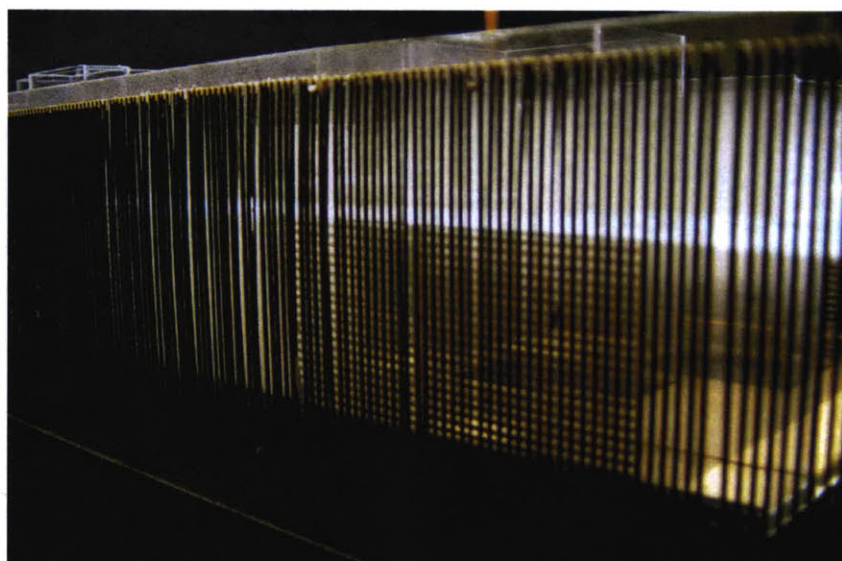
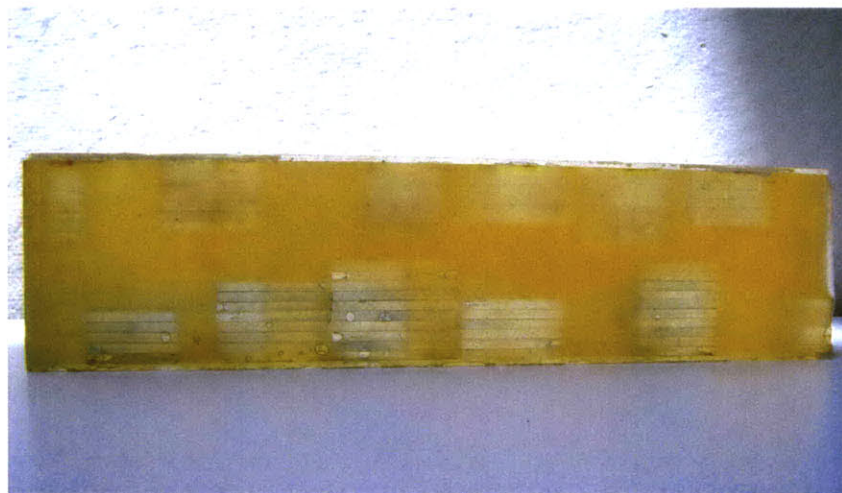
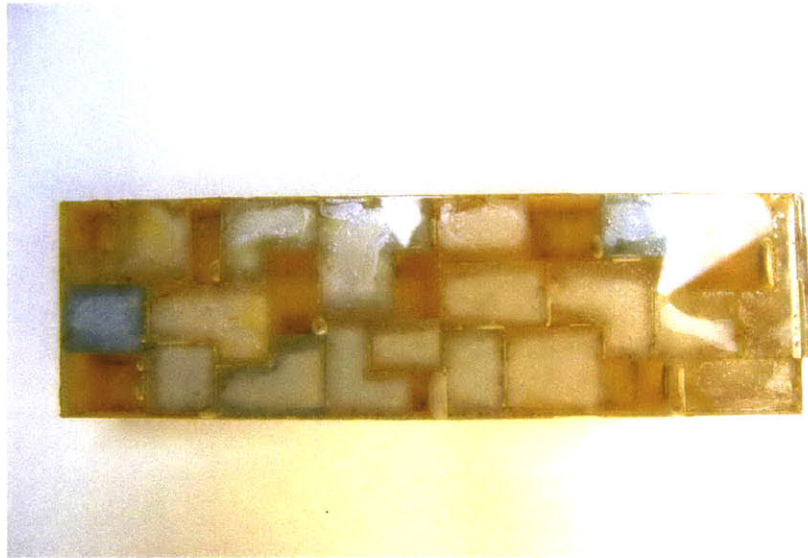
The juxtaposition of the darkness with the brightness, the solid with the void of the interior spaces, suggests a translation from the theory of Yin-Yang in contrast. This is different from the initial images of the concept model that suggest an interpretation of Yin-Yang in mingling and blending, which gives a sense of blurring and low contrast. A veil is different from a mask, a mask only conceals, whereas a veil conceals but at the same time reveals. Viewed from the outside, overlaid with the background that is the inside, the veil could be manipulated in such a way that it counteracts the contrast of the background, so the façade acquires the similar effect presented by the Chinese images: the blurring, the ambiguity, the indistinguishable foreground and background. If this is the case, the contrast in the background actually makes the role of the veil significant. The façade both conceals and reveals the contrast, and ties the project back to the initial proposed effect in the Chinese images. Different from the veil for the concept model that adds a layer of homogenous translucency, also different from the modernist view of a façade that it is an honest reflection of the interior spaces, the veil acquires its own quality and identity by reflecting the inside/outside in such particular way.









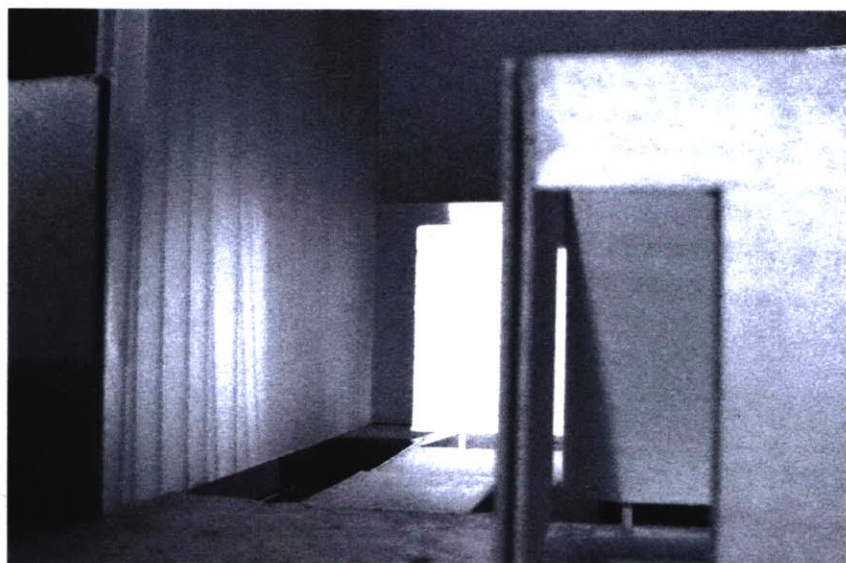
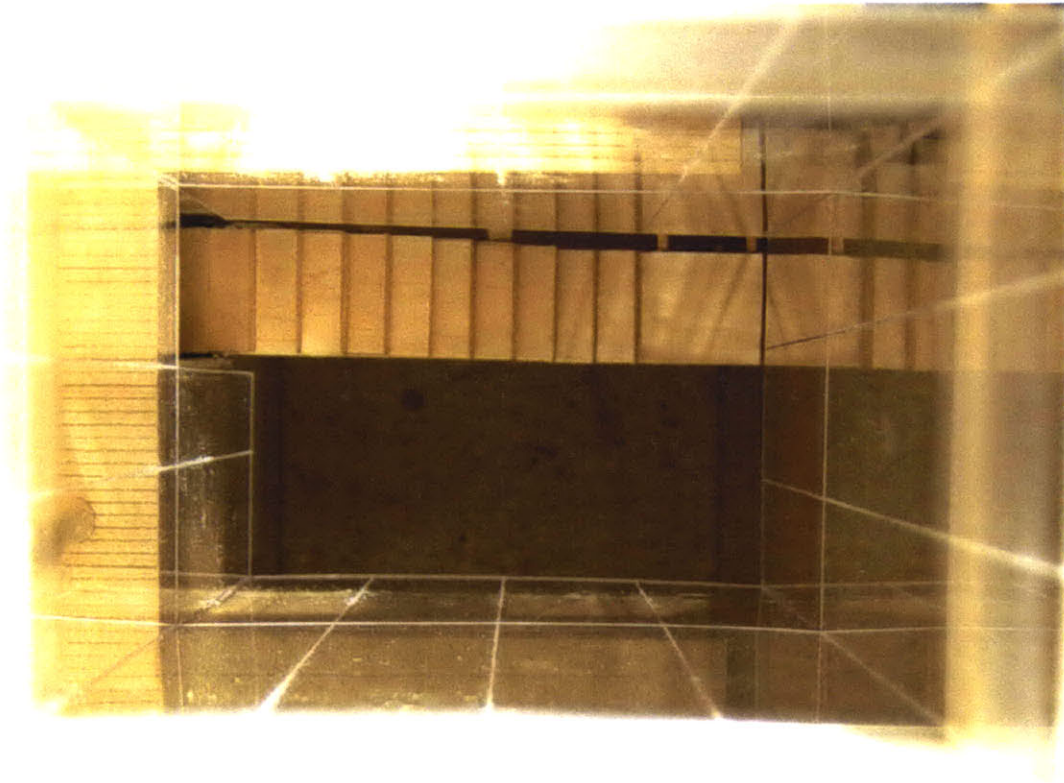


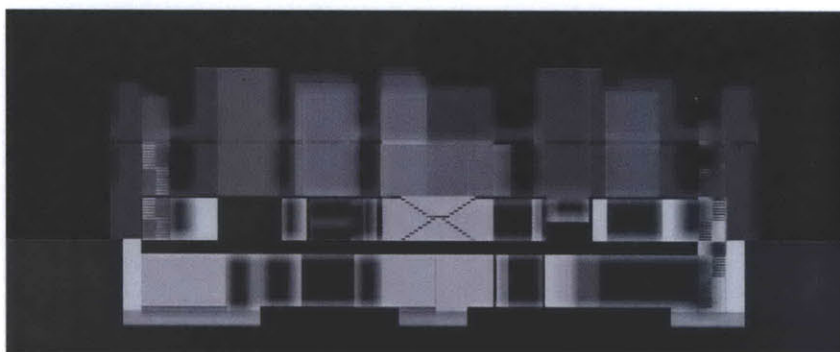
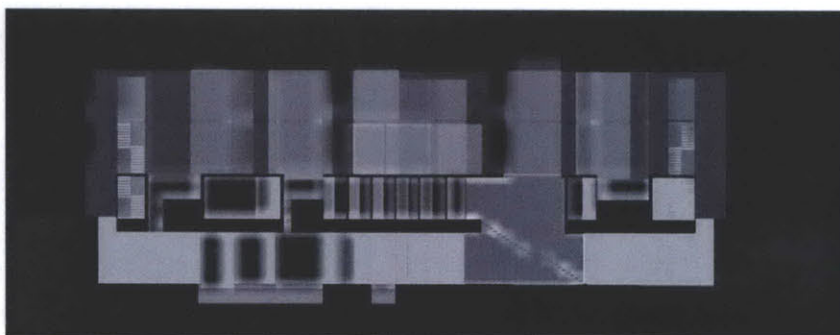
## the strategy of Light

The strategy of light forms another essential part of the design consideration. A rich palette of light and shadow is used to blur the boundaries between brightness and darkness, and to create moments of sensual intensity. To enhance spatial fluidity, staircases are used as light wells to allow brightness to penetrate into the dark, underground space. One of the staircase coincides with a light chimney, so that one perceives the presence of sky when he/she occupies the stairs – a moment of brightness and expansion. The small gap in between the floating slab and the foundation allows the underground level to be lit up from the side, thus heightens the presence of a unifying void beneath the floating mass – an interplay of gravity and levitation. Some of the bathing pools have a glass bottom, where light is modulated into different gradations upon entering the underground space. In contrast with the size and brightness of the light chimney, the overhead glass openings beneath the pools are relatively small, where light is spare and dim – an atmosphere that gives one of the two great luxuries of bathing.

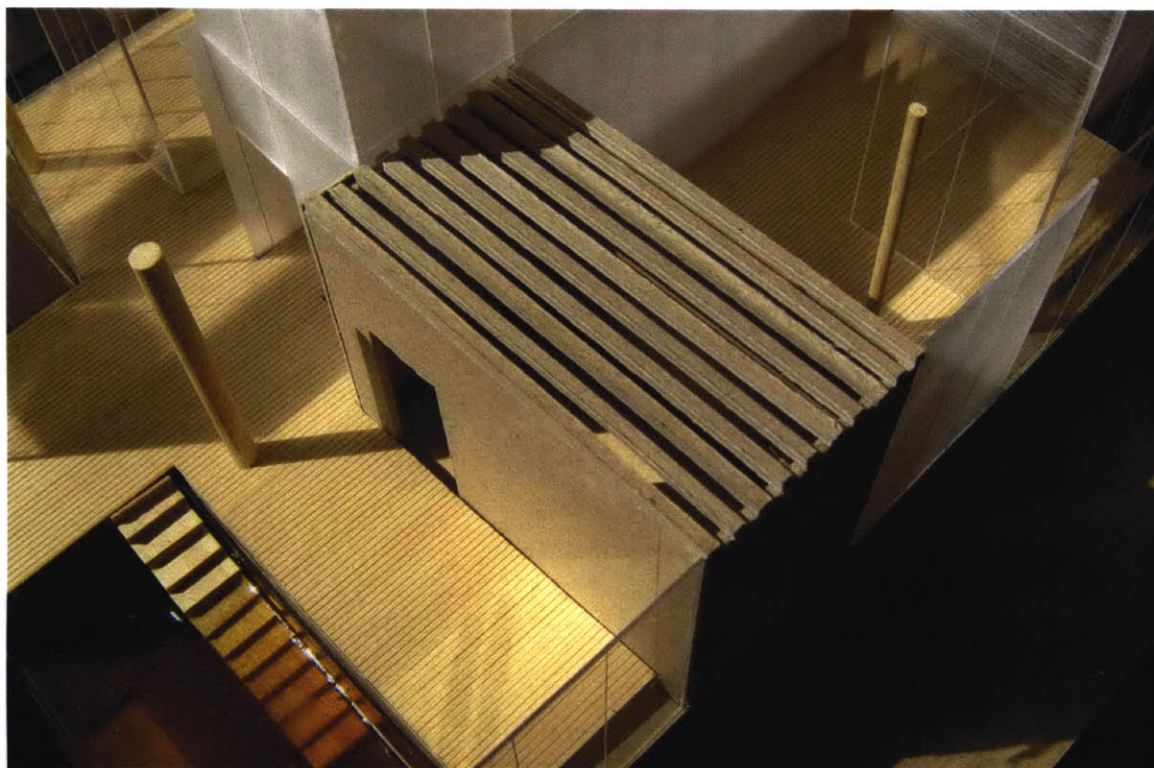




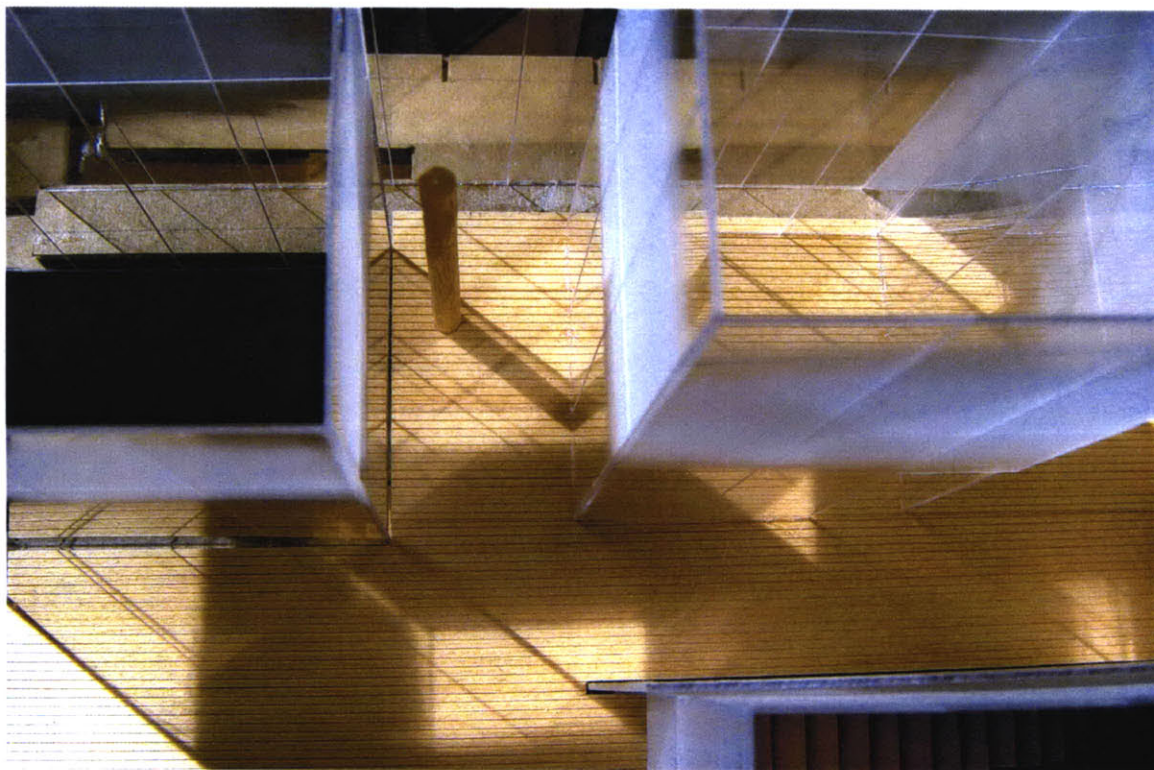






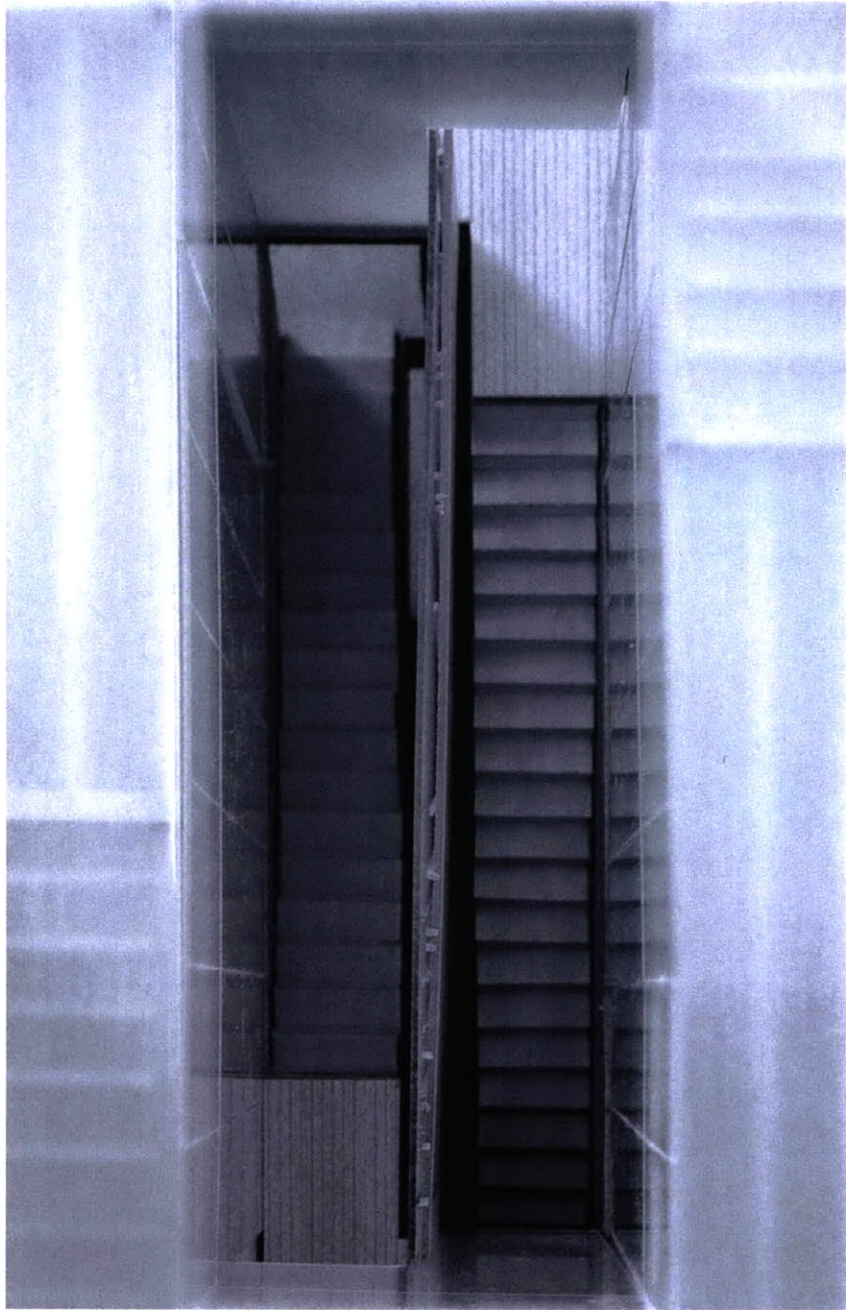




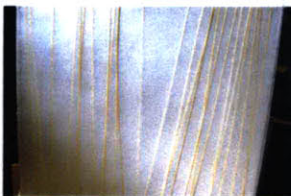
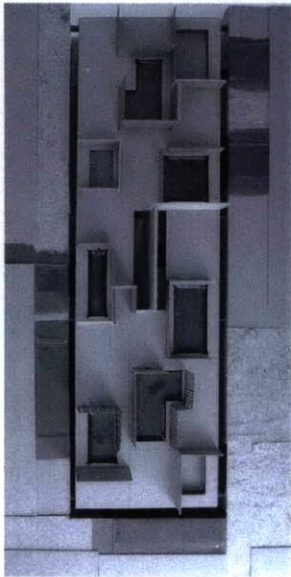
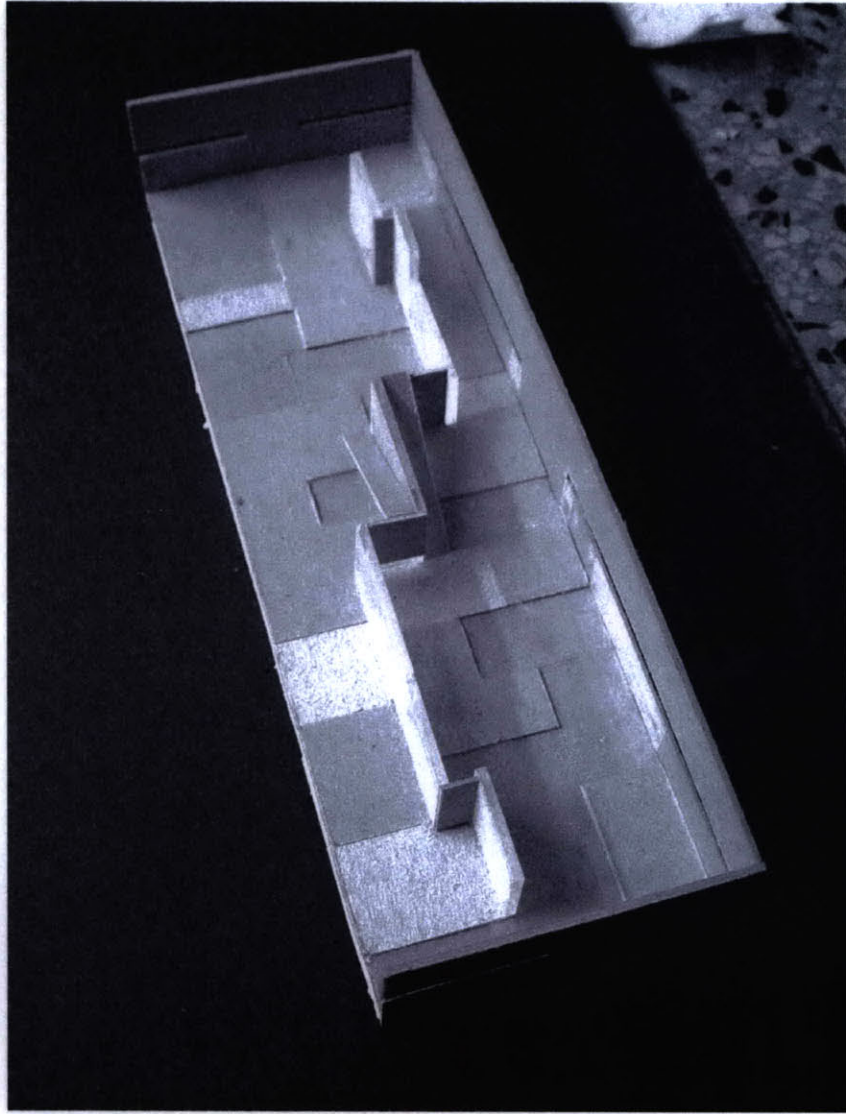


the strategy of the order of sex

The basis of Yin-Yang is men and women and how the interwoven of Yin and Yang creates the integrated whole from which ten thousand things in the world is generated. A natural and honest reflection of yin-yang in a bathhouse that has a men's part and a women's part would challenge the Chinese convention of the absolute separation of men's space and women's space, and create connection between the two parts, not necessarily bodily, but mentally. The interlocking of space, both in plan and section, reflect the strategy of the order of sex. Man enters the building from the north entrance, women enter the building from the south entrance, into the underground level. The level is divided into man and woman space longitudinally. As they approach the upper floors, they bypass each other through the central staircase, where they sense each other's presence without physical contact. The upper bathing level is divided laterally into man and woman spaces.







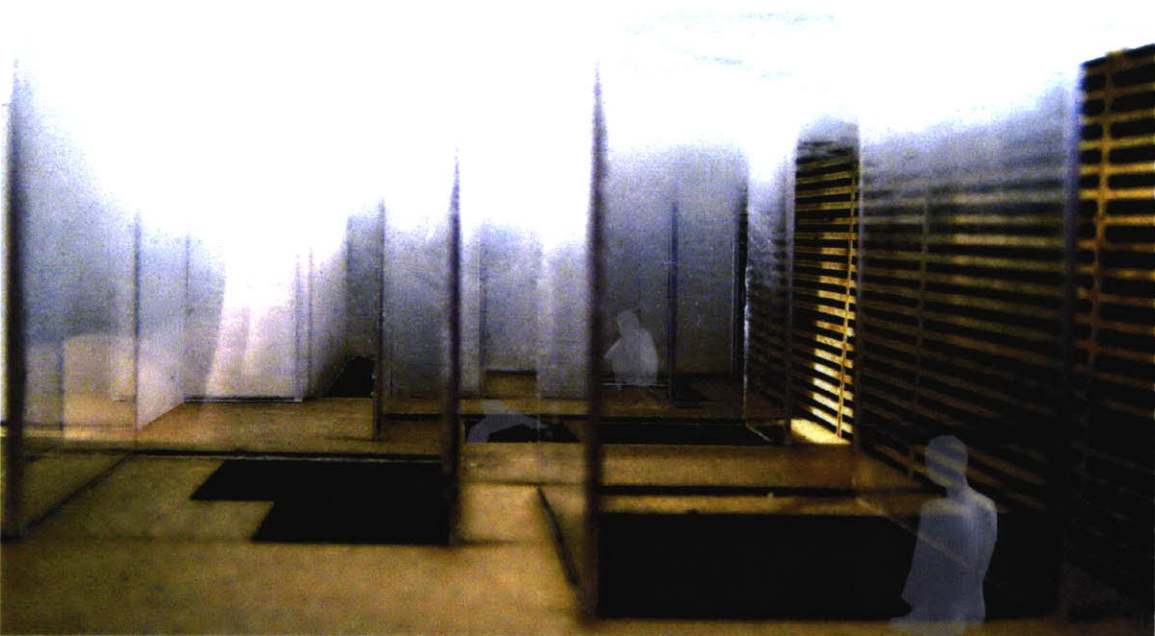
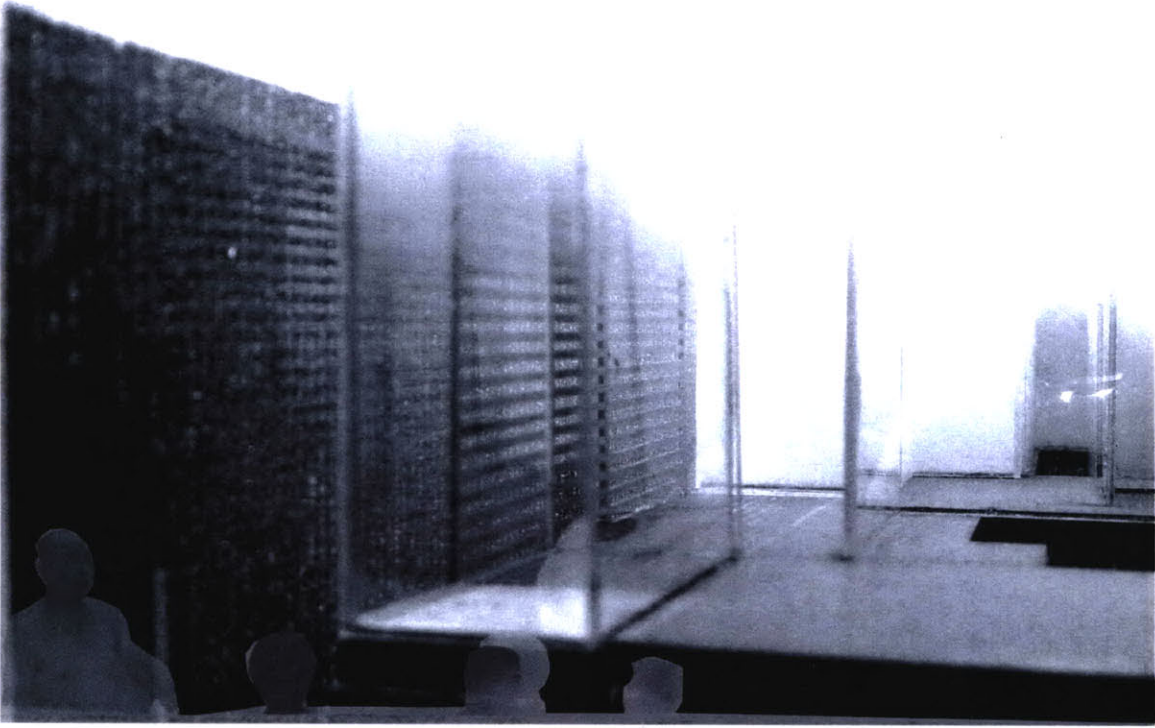


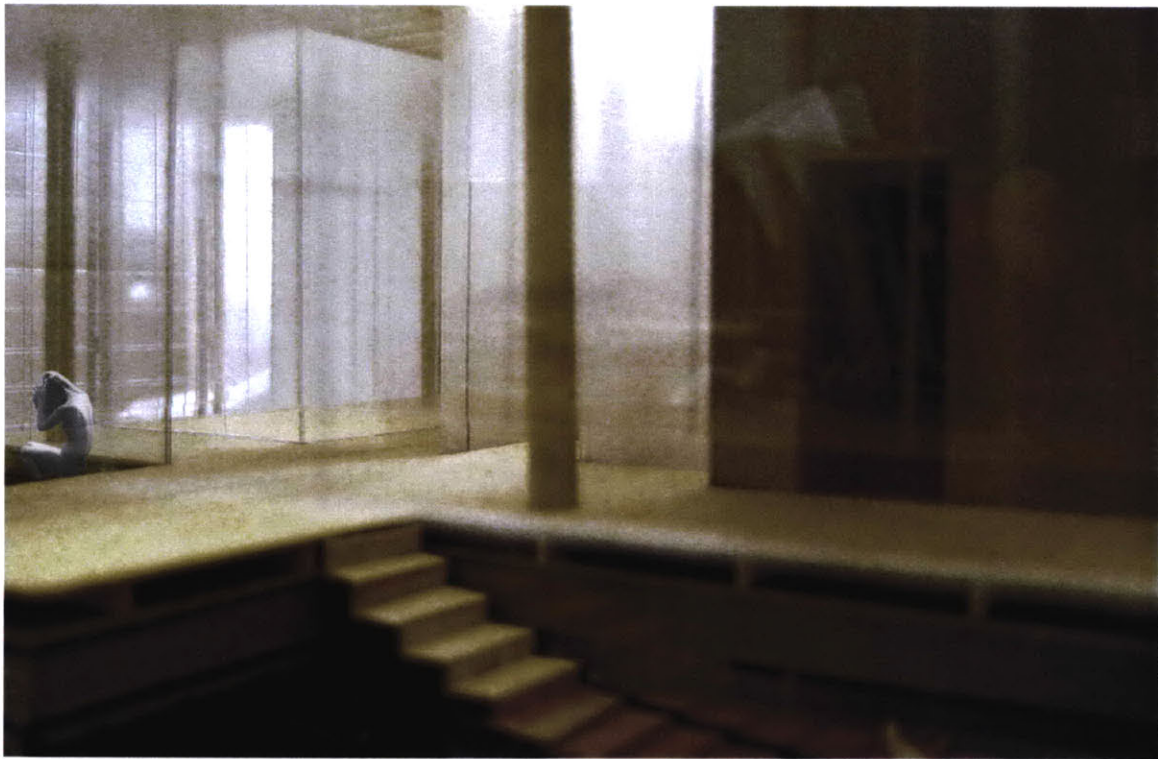
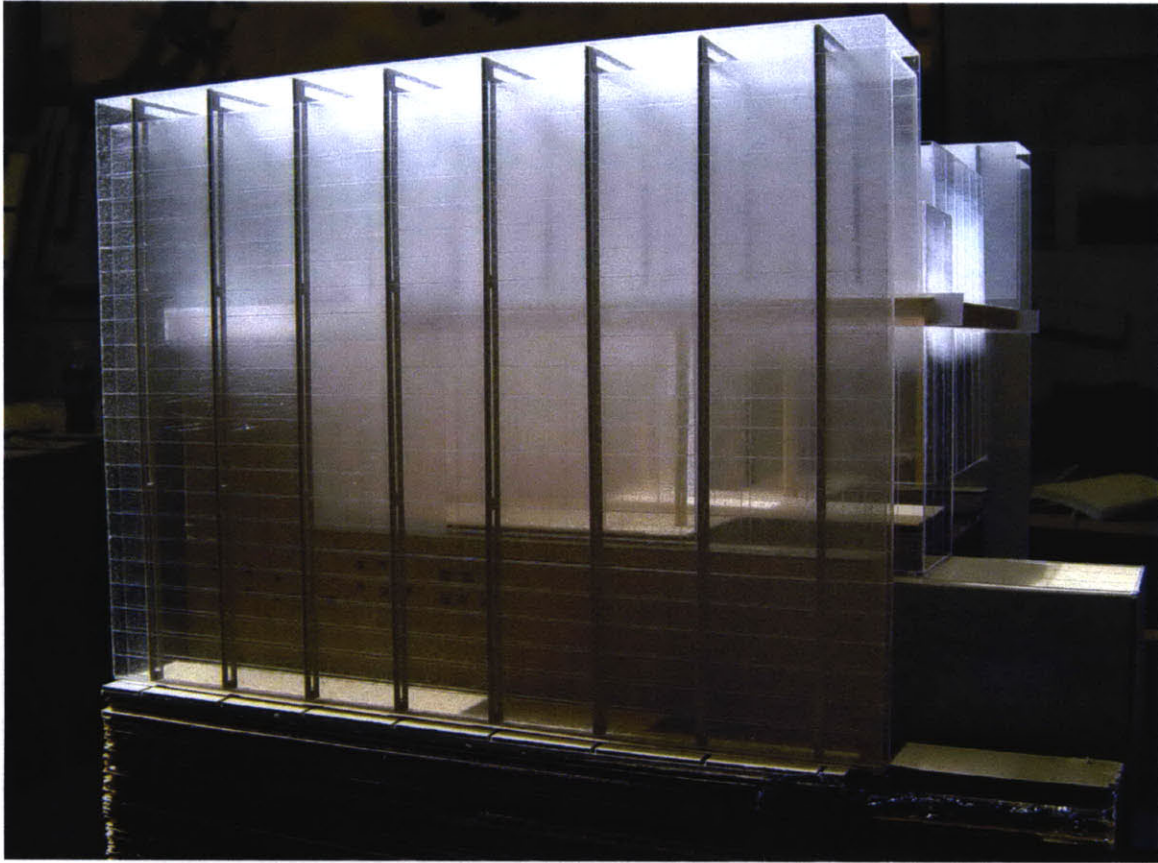
the strategy of water

There are three kinds of water: water for drinking (teahouse), water for bathing (bathhouse), and water from the nature (rainwater and landscape). Conceptually, the three types of water carry with them different programs and spatial use, which in turn require different ways of containing them – an act of puncturing positive volume in order to hold water. The act of carving out the foundation to create the underground bathing level, the act of carving out pools from the floating slab, and the act of letting in landscape and rainwater to the building interior, all tie in with the notion of water being the essential elements of design.

the strategy of visibility (steam)

Steam is in between air and water. It is ephemeral; it fills the light chimneys and interstitial space between the exterior façade and building interior. The combination of steam and glass creates duality: the sense of openness when the glass chimneys are clear, versus the sense of intimacy when they are filled with steam. It also creates duality between the tangible and the intangible: glass is tangible, steam is intangible. Glass registers the presence of steam, gives steam form and turns it into a material that creates a sense of intimacy in an otherwise transparent volume.







## duality and fluidity

The concept of yin and yang, both in complement and in fusion, is crystallized in the larger conceptual framework of fluidity versus duality. Both concepts are listed along with design strategies that manifest this understanding.

Duality between men's space and women's space.

Duality between dark space and bright space.

Duality between wetness and dryness.

Duality between space in compression and space in expansion.

Duality between the sense of openness when the glass columns are clear, and the sense of intimacy when it is filled with steam.

Fluidity of the path on the lower bathing level; a fluidity that is linear: fluidity in a line.

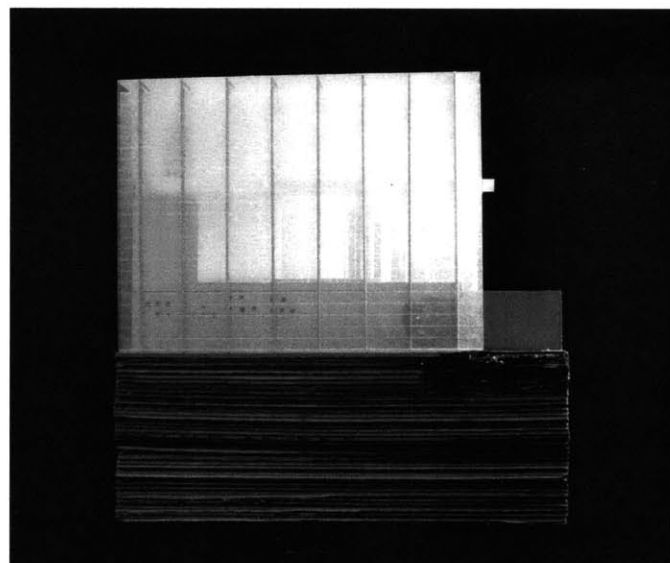
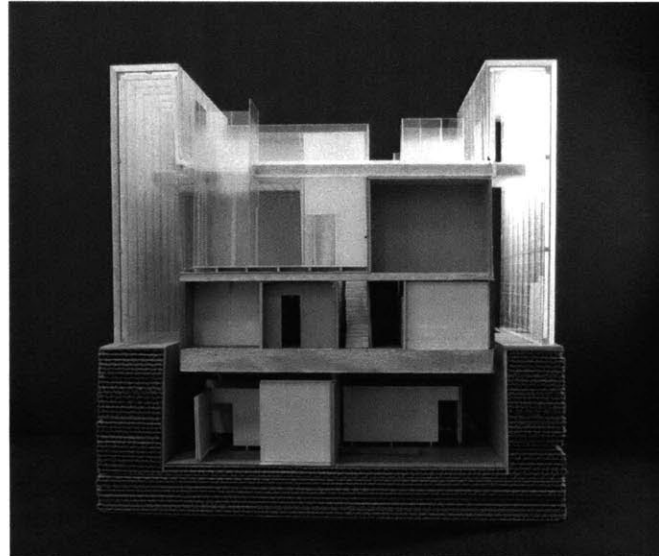
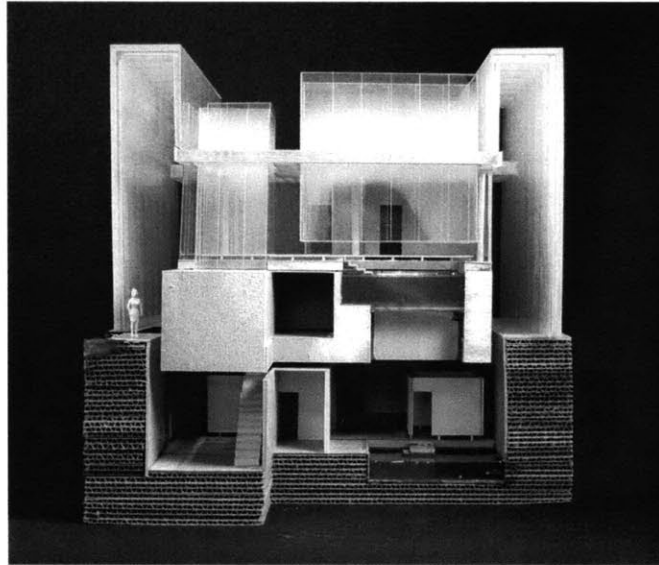
Fluidity generated by the scattered units (pools) on the upper floor, a fluidity that is non-linear: fluidity in a field.

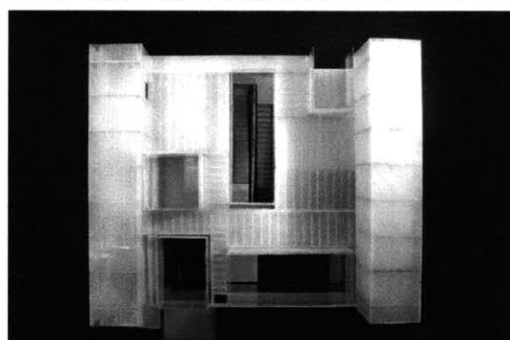
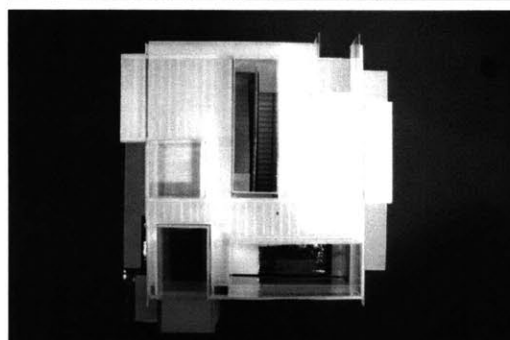
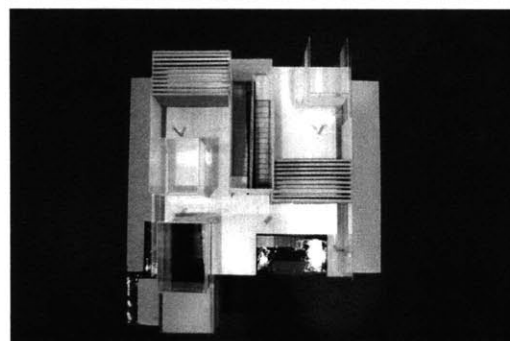
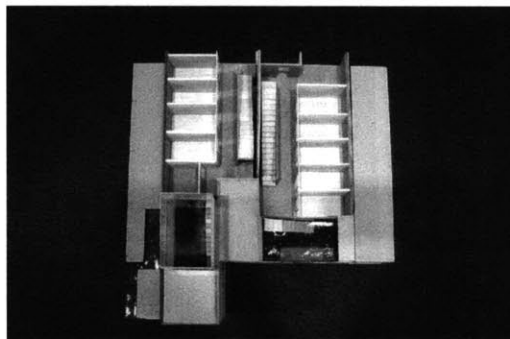
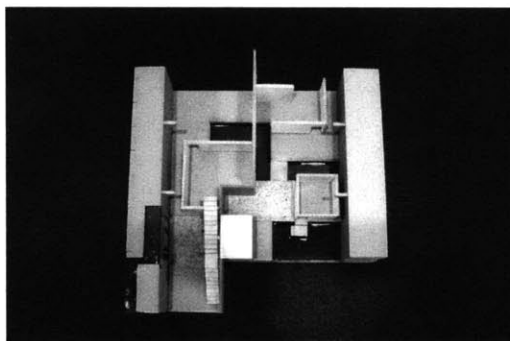
Fluidity generated by openness when the glass chimneys are clear.

Fluidity as the result of constant changing visual permeability, slight difference among each chimney when it is being used.

Fluidity coming out from blending and fusing two complementary parts: the fusion of light and shadow, of solid and void.

Fluidity generated by the steam behind the exterior façade that blurs the contrast behind.





\*All text and images by author unless otherwise noted.

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